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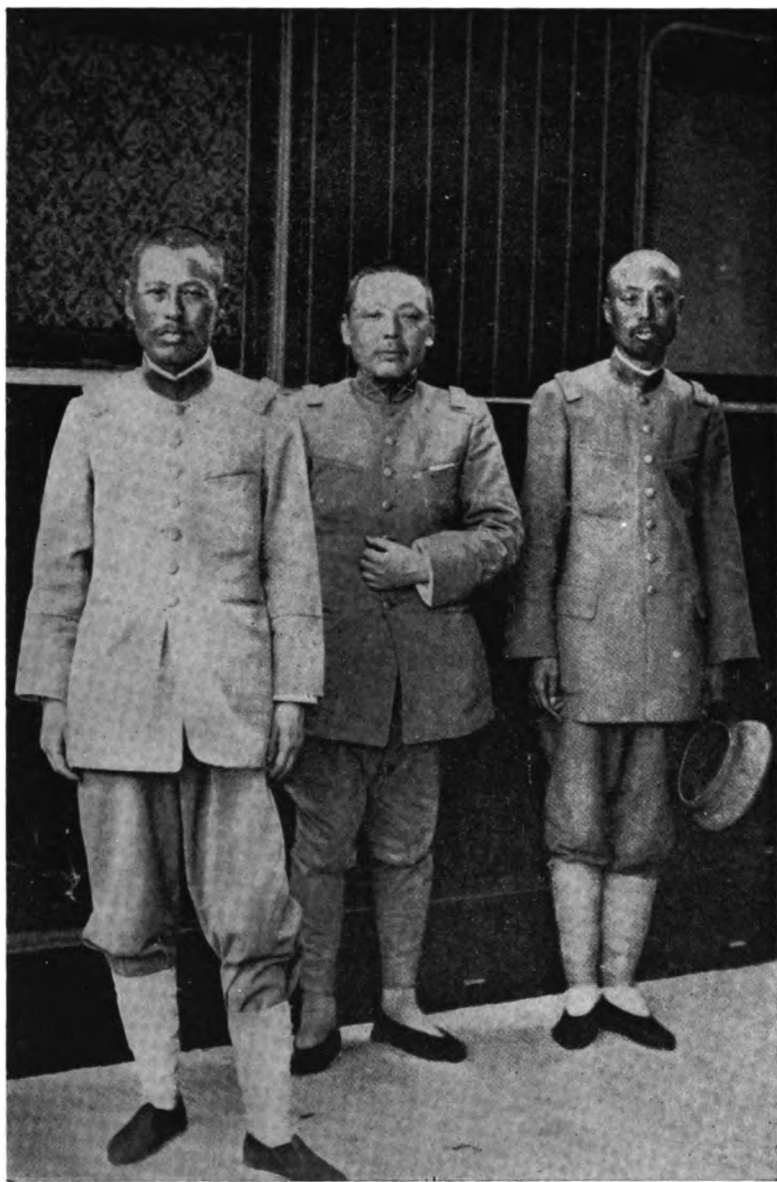
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**GENERAL WU PEI FU AND TWO OF HIS STAFF**

Wu Pei Fu is on the left. This picture was taken at Tientsin, on May 7, 1922, by the Peking and Tientsin Times, as General Wu arrived, on his chase after Chang Tso-lin.

# STONE & WEBSTER

## § JOURNAL §

### 1922

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VOL. 31

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## EDITORIAL COMMENT

### Twenty Pounds Ought and Six

**O**F many of its achievements civilization has doubtless a right to be proud. But regarding one it can have only a feeling of shame. We refer to taxation.

With reference to this problem the race has bungled in almost every particular. If we should see an individual handle his affairs in a fashion comparable to that of political governments, we should stamp him as an incompetent and as on the road to bankruptcy. It is because most persons go about their private affairs sensibly and produce things at some profit that government is able to collect money unwisely to be spent prodigally.

Civilization has made a mess of taxation because it has never considered it systematically, honestly, dispassionately and prudently. It has never, under the first head, grasped its purpose and its influence in human affairs. It has never approached the subject with real honesty, or even with that affectation which prompts us to declare that honesty is the best policy. In this particular men have always been governed by their passions, each trying, without regard to the merits of the case, to shoulder his part of the burden on someone else. Finally, prudence is the last thing one would ever think of associating with taxation, either in the collection or the expenditure of taxes.

Few persons have any just idea why we should be taxed. Every purpose but the right one has governed this nation in

levying taxation. The right purpose is, or should be, to live well within the national income and to tax every individual strictly in accordance with the benefits derived from his income. That is the only foundation on which a wise and life-giving system of taxation can possibly be created, and it is the one which heretofore has universally been rejected.

The nations have blundered in the dark for countless generations. Many, long before this, taxed themselves out of existence. Some have reduced themselves from high rank to low. Louis XIV taxed France into the Revolution. Heaven only knows what we are doing.

The ignorance that exists in the matter of taxation is criminal. We are all too busy to ask what we should be taxed for, and what is good as distinguished from bad taxation, and our legislators, recognizing our indifference, are themselves indifferent. The increase in the working capital of the nation is being stayed; the civil service, from all accounts, is overloaded with functionaries in some departments and under supplied in others; special interests receive the fostering care of the government (that is, direct or indirect pecuniary aid) to the detriment of other interests; public improvements (so called) that the nation could very well get along without are undertaken on big and little scale with an indifference that amounts to cynical flippancy. It is no wonder that the Treasury is often referred to as "the public crib."

We refrain from discussing the tremendous amount of taxation that was employed by the government in converting our railroads from earning industries to non-earning, because that was a war measure. The war, however, ended nearly four years ago and it ought now to be possible to perform the functions of government with some mature deliberation. Yet Congress is now trying to frame new tax laws, but without any clear knowledge of the purposes and principles of taxation, without freeing itself from class influences, and without insight as regards the major consequences of what it decrees. The permanent welfare of the people is overlooked in a mad chase for transient and selfish profits.

Yet many of these profits are more fancied than real. What profit can there be for anyone if a tariff bill is enacted that shall still further restrict the foreign trade of the nation? Other countries owe us at least \$10,000,000,000, and it is computed that there will be owed us annually hereafter fully

\$500,000,000 for interest. The interest, to say nothing of the principal, cannot be paid in gold. It must be paid chiefly in the products of the debtor nations. The products of our farms and mines and mills exceed our power of consumption and we are in great need of ever enlarging foreign markets. Yet there is danger of a tax law (that is all a tariff law is) being enacted that will be a dead hand on our foreign trade.

While Belshazzar feasted in fancied security the enemy was entering the city. It was when his pomp and luxury were at their highest that his glory departed from him. Many empires have perished in the past, but it is a safe assertion that it was always for one or the other of two reasons — moral rottenness or economic decay. And it is also a safe assertion that economic decay was always the product of ignorant and wilful taxation.

We have prided ourselves so much on our strength that it has never seemed conceivable that such a fate could overtake us. Yet we are not immune from that law so admirably stated by Micawber: "annual income twenty pounds, annual expenditure nineteen nineteen six, result happiness. Annual income twenty pounds, annual expenditure twenty pounds ought and six, result misery."

We may think that our annual expenditure is still nineteen nineteen six. But are we sure? Results do not always tally with bookkeeping.

A merchant or manufacturer frequently takes more out of his business than it can stand. His house is too palatial, he has too many servants and automobiles, he allows himself too much luxury. His friends and neighbors (and very likely he himself) are not aware of the fact until the assignee or receiver steps in. Such a prodigal career is, however, not nearly so easy for an individual as for a government. The individual discovers his folly more quickly; and the remedy is more quickly applied, either by himself or by those he does business with.

Micawber had sensible notions regarding income and expenditure, but he did not govern his life by them. He lived beyond his means because he was always expecting "something to turn up." He knew the right and yet the wrong pursued. But in the matter of government receipts and expenditure we not only pursue the wrong, but apparently do not even know the right.



## Prophets and Sea-faring Men

A READER has sent us some comments on certain of our editorial utterances of last month. They are headed "Comments from a cowardly anonymous person." This is really quite unnecessary, for the comments are not in the least cowardly. Indeed most of them are debatable, and some of them have furnished us with new trains of thought, for which we desire to return thanks.

Our critic's handwriting is masculine, but the psychology seems to be feminine. Let this not be considered an invidious distinction. Woman possesses a bloom imparted to her by her fine emotions which, alas, most of us men lack. We are merely thinking animals, and our thought is mostly spent in discovering the practical methods and the wherewithal to make the world the kind of place she would like to have it. We must confess that our task is made a little harder by her impatience. It is perhaps an impatience at hard facts that causes us to suspect that our critic's psychology is feminine.

But there is another thing. Our critic seems somewhat deficient in a sense of humor. Humor is by no means an exclusive possession of men, but far more men have it than women. Humor springs from a recognition of incongruities, and women have little patience with incongruities—except the many that characterize their own toilets, and these, paradoxically enough, the masculine portion of humanity is quick to perceive.

Our critic in fact has made us feel about as Dean Swift must have felt after he printed his "Modest proposal for preventing the children of poor people in Ireland from being a burden to their parents or country, and for making them beneficial to the public." The dean's proposal, it will be recalled, was that such children be eaten. Though it must be confessed that the dean had a bitter streak in him, he was not quite so bad as that. A great many persons, however, took him seriously.

Our critic appears to take us quite as seriously. He says that we lack "sympathy for the people." It may be true that we lack sympathy *for* the people, but our sympathy is all *with* the people. (We admit that this is unhandsome, but we are human—our critic has found fault with one or two bits of our rhetoric.) We wish the people had as much concern for

itself as we have for it. It is no sign of friendship to be continually upholding another in courses which you know will work him harm. Nor is there a lack of sympathy in telling another to look to his steps. What, we are afraid, our critic finds lacking in us is not sympathy but gush. Honestly, we would gush if we knew how, but we don't—perhaps we are too masculine.

Life, with all its pleasures, is a hard, grim fact. We eat, drink and try to be merry and tomorrow we die. Anyone who has the courage to meditate on his lot will be apt to feel that he is

“A leaf that fadeth fast,

A little shifting dust before the blast.”

That is what we all are, regardless of our creeds or our moral conduct. You can't sentimentalize this grim fact away. We are in the clutch of forces infinitely stronger than ourselves. But the grimness of life consists, after all, in our refusing to recognize and be bound by our limitations. We try to live outside of them and become contentious and miserable. And because we, personally, do not applaud this course, our critic says we lack sympathy.

We doubt if the ills of humanity occasion more grief in his mind than in ours. The difference between us is that he gets excited over them while we try to view them with some sort of philosophic calm. If they can be cured, we want to do our part in the curing; if they can't be cured, we prefer to laugh rather than cry. But perhaps that is presumptuous, for only the brave can laugh at danger.

As our pages are largely devoted to material affairs (with which even the most sublimated minds have, unfortunately, to have some dealings), we should not be taken too sharply to task for mentioning the word “wealth” in one of our recent editorials. Yet as a matter of fact we got this: “Is the creation of wealth the test of strength? How about beauty, the quest of truth, the making the world a better place to live in?” So far as our original remark is concerned, this is a *non sequitur*, as the logicians say. The two things have no more relation than a cauliflower and a cobblestone.

Nevertheless, we are glad our critic made this comment. For it gives us a chance to make a few explicit statements. The creation of wealth is *not* a test of strength—and then again it *is*. Beauty is a test of a people's strength, but beauty

does not flourish long without wealth to support it. The quest of truth is nobler than the quest of wealth, unless you seek wealth to promote truth and beauty. To make the world a better place to live in is the finest mission one could have in life, but what do the words "a better place to live in" mean? Do they not mean in most minds more of the creature comforts, amenities, courtesies? All these things spell wealth.

Wealth is a vulgar thing compared with these other things. Rightly considered it is their bond servant. But it is essential.

Consequently, as we want more beauty and truth (personally, we have never yet had enough), we want to see wealth conserved and increased. It shocks us to see it wasted, for in our mind's eye we can see how the whole tone of human life (physical, mental, emotional and moral) must necessarily be lowered.

Our anonymous correspondent criticizes one of our statements on the ground that though it is logical it is harsh. This is hardly fair, for the harshness is in the logic (he says it is logic) and not in us. We do not for a moment suppose that when our critic's physician gives him a diagnosis of his physical condition and writes him a prescription (which is a logical feat) he calls him harsh.

We did not make the facts that constitute the harshness of life, and why should we be afraid to give them names? Some persons have a superstitious fear of names. They think you can mitigate harshness by not calling it harsh. They appear to think that by changing the name you can abolish the fact.

This is a world of necessity. There are certain things we must do, and certain that we must not do, if we are going to be prosperous and happy. We may desire to do the things we should not do and not to do the things we should do, and we often follow our desire. But our desire is not the determining factor. It is necessity that dictates the result.

Nature (and human nature, too) must obey necessity, as Shakespeare says. To be sure the great Pitt once remarked that "necessity is the argument of tyrants." But it depends on who your tyrant is. If he is a fallible, self-seeking man, well and good. But if your tyrant is an inexorable law of nature or of human nature, the situation is completely reversed. If your first kind of tyrant becomes insupportable, you can dynamite him. But there is nothing you can do with

the second kind of tyrant. It will laugh you to scorn every time.

Life is too grim for platitudes and sentimentalities. It is better to call a spade a spade. It is better to look facts squarely in the face, rather than to hide your head in the sand when they appear on the horizon. It is better to know what you can do before you stake your entire fortune.

This world has not been made rich, intelligent and fairly virtuous by brass bands and torchlight processions, nor by fine words devoid of harshness. Quite the contrary. The great prophets and reformers—the ones most intent on putting mankind on a higher level—have been men of blunt speech. They saw most that there was to be seen and they never tried to blink the facts. They did not use whitewash. They thought the best way to serve the people was to tell them the truth. They were men of grand sentiment, but singularly unsentimental. They preached the logic of life in all its harshness. They knew that fine words butter no parsnips.

Making the world a better place to live in is like navigating a ship in a sea beset with head winds, cross currents, dangerous rocks and shoals, and subject to violent storms. Nothing could be less sentimental, less rhetorical, less "sympathetic" than sea-faring language. But perhaps it is the most effective in keeping the ship on an even keel and getting her to the haven where she would be.

### That Wretched Primordial Ooze

"I NEVER could believe that Providence had sent a few men into the world, ready booted and spurred to ride, and millions saddled and bridled to be ridden." So said Richard Rumbold on the scaffold in the seventeenth century.

What he said then is in substance what a great many well meaning persons are saying today, in company with a great many who are not so well meaning.

But facts are stubborn things, as we have said not a few times in the past. If Providence is not to blame, who is? Personally, we never arraign Providence. There are some who think they could have given points to the creator of the universe. But we are not of that number. If there is or was a great first cause, Providence is of course merely the means by which the design is worked out. Consequently you stamp

yourself a fool if you rail at Providence. If Providence created the distinction between the riders and the ridden, we are helpless. We may talk, but we cannot change things one iota.

But if Providence did not create it, who did?

It is a hard question to answer, and for one reason because you have to go so far afield for your facts. They do not lie at your door, as so many suppose. Effects are easily seen, but causes are baffling.

Let us assume that a few men come into the world booted and spurred, and millions saddled and bridled. To whom or what shall we trace this shameful fact? As we are told that we must not impute it to Providence, where shall we cast our eyes?

It is certainly puzzling. The millions who claim that they are saddled lay their ills to the capitalists. But to what capitalists? Not to those of today, for if every one of these had remained a poor man, the millions would be no better off. Suppose, for example, that Mr. Rockefeller had not grown so enormously rich by developing the oil industry. What would have happened? Would the so-called saddled millions have developed it and taken the profit? Not at all. Mr. Rockefeller was born poor; indeed, he was very much saddled at the start. Yet he broke loose. But if he broke loose, why did not all the other saddled persons break loose? That is a delicate question.

But possibly the personage whom we quoted at the start had in mind only those who are born rich and to places of power, and not at all those who, though born into hardship, work their way out of it and become rich and powerful. But does that change the problem very much? If the former are blameworthy it is because of the kind of ancestors they had. They were the criminals.

If it is true that we are all descended from a pair (or should we say a number of pairs) of exceptionally capable apes, it is possibly there that we should look for the monstrous and shameful distinctions among mankind. Our simian ancestors must have been the fittest among all the apes. They came booted and spurred, whereas the rest of the apes came saddled and bridled. And they entailed on only a few of their descendants the power to come into the world booted and spurred.

It is safe to say that in the very first days of our human ancestors there were class distinctions. At the time when everyone was clad in skins or feathers (if clad at all) and ate what he could pick from the bushes, capitalists existed. The man that could make and use a stone axe was booted and spurred in comparison with those who could not, or would not. There were exceptional men then, as there are now.

We are afraid that we shall have to assume that all our ills originated among our ape ancestors. And yet, on second thought, that cannot be true. For the apes, like human beings, were developed from exceptionally capable specimens of a lower order of life, and this lower order from exceptionally capable specimens of a still lower order. And so you go back and back until you reach the primordial ooze. Thus, if we understand Mr. Darwin aright, it is the primordial ooze that we must blame for the fact that some twentieth century human beings are booted and spurred and some saddled and bridled.

Putting two and two together, we should suppose that if all the apes had been on the same level of high capability, all would have become human beings. Now who is to blame for the fact that they were not? This is an important question. For if we have the right to resent the fact that some men come into the world booted and spurred, while many come saddled and bridled, we have an equal right to be indignant because a similar state of affairs existed among the apes.

For there is an ugly implication in the fact that, in this respect, human experience has duplicated ape experience, which in turn duplicated the experience of every order before it back to the primordial ooze. If you ask why millions of men are saddled and bridled, we shall logically ask why, so to speak, were millions of apes saddled and bridled?

Why in every order of life have the few gained more than the many? Science records the fact but does not tell us the reason. We see the few getting riches and power and passing them on to their posterity. If we say that the few have no divine right to get and bequeath, does it necessarily follow that they have infringed the comfort of the millions?

One will have to be careful in answering this question. If one says yes, we shall be sure to ask: If a few had never risen above the millions in getting riches and power, where would

the millions be today? We get dreadfully excited at the thought of a few being booted and spurred and millions being saddled and bridled; but after all is it not right to the point to ask what would have happened to the millions if they had not been saddled and bridled?

Let no one think this a cynical question. It is facts we are after, for this whole situation is based on hard facts and on nothing else. Considering what humanity is like (look at Russia and certain recent activities in the southern Illinois coal field), one wonders what would have been the course of history if the millions had been booted and spurred. The few who have been booted and spurred were not always wise, just and humane, but they have kept human society from actually disintegrating.

So far as human affairs have made any progress at all, it has been the result of intelligence. Now intelligence has been a thing of slow growth. What the many have possessed they have absorbed from the few originating minds. Until recently it had fondly been hoped that by this process the general level of human intelligence had risen appreciably. The present conduct of human affairs seems, however, to have left a doubt in some minds on this score. Furthermore, it is questioned if the booted and spurred are as effectively equipped as we had supposed. Anyhow, they are not finding it as easy riding as formerly.

We could make some head or tail to the problem if we were allowed to include Providence as a factor. But we must leave Providence out. We suspect, however, that it is allowable to include it when considering the development of the fittest among the apes; certainly when discussing the origin of the species back of the apes. Man is different from the lower orders because he thinks. They don't think—that is, we say they don't. They are governed by instinct, not by thought. Consequently, we may divest them of responsibility. In that case is not Providence, or creative design, responsible?

But Providence is not to blame where man is concerned. Well, then, whom can we blame but man himself? If we discuss the problem from that angle, some interesting thoughts immediately arise.

The booted and spurred, we are told, comprise only a few persons; the bridled and saddled are numbered by the millions. The millions, we will suppose, know quite as well

what they want as do the few. Why then have they allowed the few to ride them?

Could the few have ridden them if they had decreed otherwise? Why did they not decree? They now seem more intent on decreeing; but why did they delay so many thousand years? You must use very careful language in answering this question, otherwise you will be betrayed into dangerous admissions. You must say nothing that will imply that at the start the millions were not as intelligent, as ambitious, as forceful as the few. If you claim that, you will give the case for the millions completely away.

But suppose you do say it. May we not then ask point blank if it was not better for the few to do something to make things move? When we stopped being apes and became men, we did not immediately become equally intelligent, ambitious and forceful. The things that have made this world a more comfortable dwelling place than it was for the monkeys were discovered or invented by exceptional persons, by those who discovered the way to make a fire, to spin a yarn, to fashion crude implements of industry, to persuade or coerce people to live under some form of government instead of flying at each other's throats.

As soon as we ceased being apes, ringleaders in industry, government and war began to appear on the scene. Why did not the millions suppress them at the start? Was it because they were too useful? The millions could easily have pulled the boots and spurs off the few, instead of which they helped buckle them on.

The millions have forgotten that. We are obliged to put it this way because we are not allowed to ascribe anything to Providence.

Now, as a matter of common sense, why at the start, and down through the ages, did the millions with their overpowering physical resources allow the few to get and keep more wealth and power than themselves? Because by so doing they became safer and more comfortable. They allowed the few to do the thinking, and thus got rid of a very tiresome task. In the first generation after the apes the many probably worked as hard physically as the few. But they did not think as hard. You may talk until the last gun fires about the causes of the distinctions among mankind, but there was the first and great cause. We may wonder why the few thought



harder than the many, but we cannot answer that question without casting sheeps' eyes at Providence, which is not admissible.

Let us stick to facts. The few thought harder than the many and the many were glad to have them do so. It was that fact that set the race on the road uphill. The many, so to speak, hung on to the coat tails of the few. When we recall the magnificence and autocratic power of the kings of Egypt, Babylonia and Assyria, we should not forget that the millions were infinitely better off than was the first generation after the apes.

And the same thought should occur to us when we think of feudalism in the Middle Ages. The feudal baron did not pretend to be a saint, he was no socialist, he knew his power and exercised it pretty rigidly. But without him life would have been chaotic. He held things together so that those who did him service could manage to dwell on the face of the earth.

The ancestors of the booted and spurred were all at the start as poor as Job, quite as poor as the ancestors of the saddled and bridled. The difference between the two was that the first did not want to stay poor and so got busy. If they had not got busy the millions of today would not be living in frame houses, with a steady and abundant diet, warmly and decoratively garbed, and riding in Ford cars.

A great deal of nonsense is uttered about the booted and spurred. If they wear boots and spurs, they have first to make them before they put them on. Napoleon made his, and Mr. Rockefeller made his. The trouble is, most of us are mentally too lazy to fabricate boots and spurs. As a rule, if we are going to be great the greatness has got to be thrust upon us.

But even if greatness is thrust upon us we have got to work hard to keep it. It has a way of petering out. Where are the descendants of the feudal barons of England? Most of them are tilling the ground or working on salaries and wages, contributing a very goodly percentage to the present so-called saddled and bridled. The millions need not worry about the few who possess wealth and power. They will not keep them long unless they use them in a way to contribute to the general good.

The only way to get and hold in this world is to use your

wits. But a great many persons want to play dog in the manger. They won't use their wits and they are mad at those who do; so mad, in fact, that they would like to take away their gains from them. But even if they should do this they would have to employ about as much wit as the others. You can't take your neighbor's property away and get as much effectiveness from it unless you have and use your neighbor's brains.

After all, if the millions should get rid of the few who now possess wealth and power, what would happen? Why, they would immediately select another few to take their place. In fact, the second few would be on the job before the first few had taken their departure. For the millions never do anything without leadership, and they usually select as leaders those who blow the loudest horns. Indeed, the millions have a way of not recognizing their hardships until such would-be leaders come along and trumpet them.

Don't for a moment suppose that the civilization the world has thus far created is ideal. It is very far from that. It would be easy to imagine a civilization very much better in almost every respect. Yet why have we not made one? Apparently because no one cared to undertake the job. The race has done the best it could with the kind of leadership that offered. Heaven knows no one will object to a better leadership. But before swapping leaderships it is natural that one should want to know what kind of a bargain he was getting.

It may be accepted as a fact that, no matter how many revolutions the world may pass through, and no matter how red they may be, there will always be a few who are mentally booted and spurred and millions who are mentally saddled and bridled. In the future, as in the past, the first will provide the world with its leaders.

The whole thing comes down to this: Will the mentally booted and spurred of the future be better morally than the same class in the past? Are the sinners all going to become saints. Is every leader going to take to heart the proverb that "the things of friends are common?" Indeed, is every leader going to regard everyone else as his friend? That is, in the true sense.

There were distinctions in the primordial ooze, there were distinctions among the apes, there are distinctions among men. We are now going in for strict equality, but alas, the movement should have begun in the primordial ooze.

And we say this in face of the following from John Selden, who lived in the same century as Richard Rumbold:

"The difference of men is very great. You would scarce think them to be of the same species, and yet it consists more in the affection than in the intellect. For as in the strength of the body, two men shall be of an equal strength, yet one shall appear stronger than the other, because he exercises, and puts forth his strength; the other will not stir nor strain himself. So 'tis in the strength of the brain; the one endeavors and strains and labors and studies; the other sits still and is idle and takes no pains, and therefore he appears so much inferior."

Granted! But why does one strain and labor, while the other sits still and takes no pains?

# Observations in Japan, Korea and China

BY EDWIN S. WEBSTER

[This article is compiled from a very informal talk by Mr. Webster before a gathering of members of the Stone & Webster organization.—THE EDITOR.]

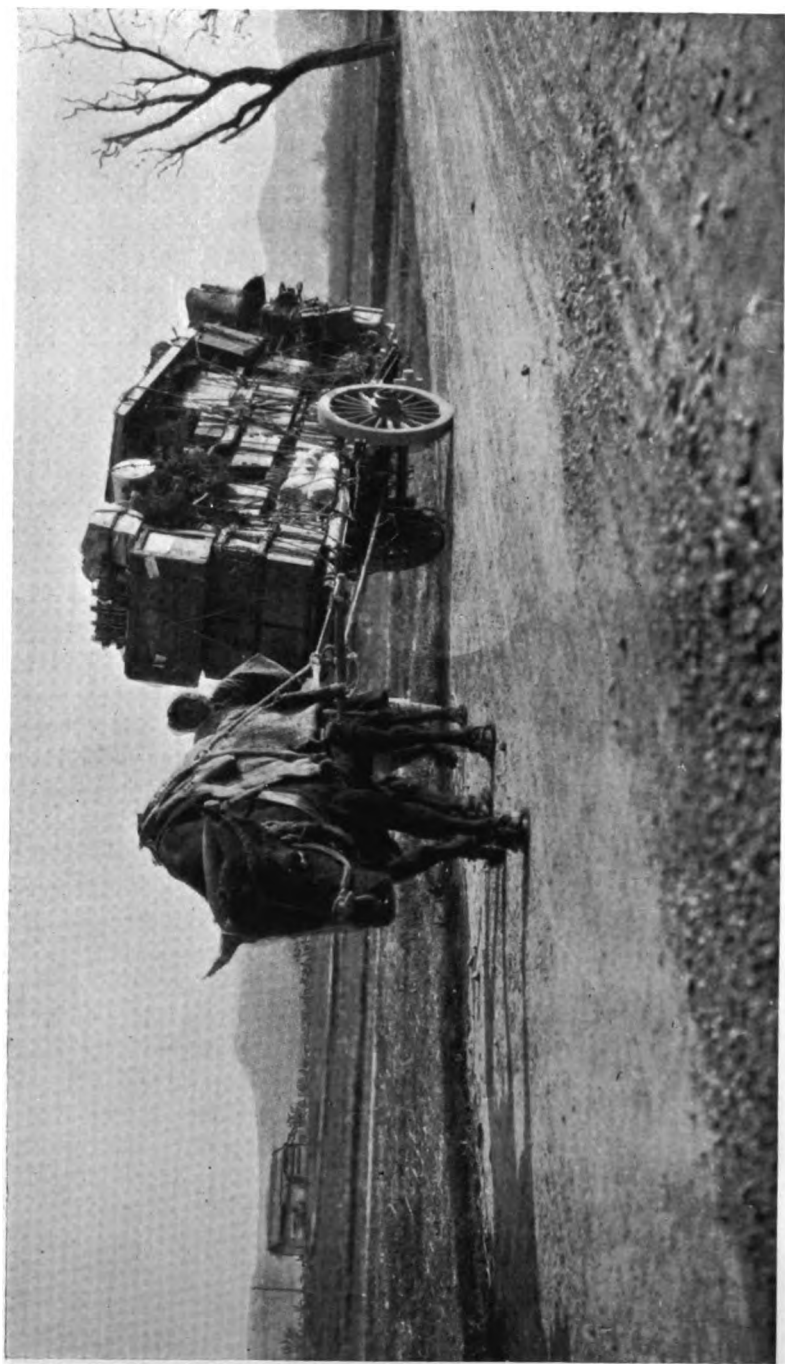
**Y**OU cannot be half as glad to see me as I am to see you. It is pleasant after such a long trip as I have just taken to see familiar faces, to see signs that you can read, and to be able to tell your chauffeur what you think of him. I wanted to do the latter during my whole trip.

Our trip to Japan was in connection with certain electric developments on which we are engaged. Mrs. Webster and two of my daughters accompanied me. We went by the northern route. Everybody told us it would be rough, but although we were not very good sailors, we decided to chance it, as we wanted to be as expeditious as possible. Mr. Sawyer, of our organization, who is very familiar with Japan, said that it would probably not be rough more than two or three days out of eleven. Well, we had one day, or part of one day in the middle of the ocean when it was "fairly smooth," and another also when we were sailing along the coast of Japan. I think there may be a great difference of opinion as to what constitutes smoothness. We had racks on the table all the time, also snow and slush on the deck—it was the roughest passage I hope I shall ever take. I think our engineering division must be web-footed, because Mr. Muhlfeld and Mr. Devaney, who accompanied us, were perfectly comfortable.

But to give you some idea of the way the boat acted, I may say that everything was bolted down. You started to move a chair, and it was fastened to the deck. As it was cold, there was an open fire in the main saloon. There was also a big table, bolted to the floor, that must have weighed nearly half a ton. On one of the roughest days the table broke loose and traveled across the room. Fortunately there was nobody in the way, otherwise some one might have been killed.

After 11 days we arrived at Yokohama, and almost immediately went into the back country. In other words, before we were settled we were plunged into real Japanese life.

We went first up to the Tone River, where we took automobiles. It was raining hard that day. We drove seven or eight miles beyond the railroad. It is a more or less mountainous country, much of which cannot be cultivated. When our business for the day was finished we took a little electric



**FAST FREIGHT NEAR KYOTO, JAPAN**

railway car and went up 3,000 feet, where we spent the night. There was a Japanese inn there at which we put up. It contained no furniture, as we should say. We had to sit on the floor, sleep on the floor and eat with chop sticks.

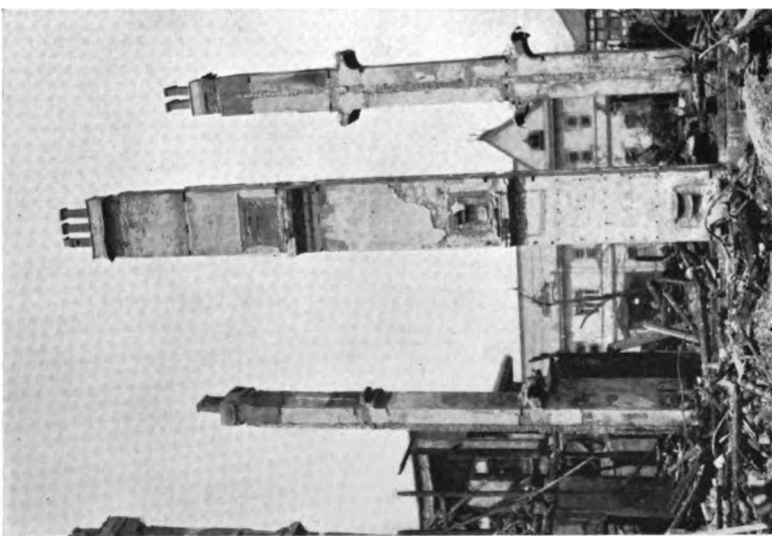
Japanese houses are built without nails. The framework is lashed together with bamboo or pinned with wooden pins, and then covered with paper screens. The snow was on the ground when we were there, with nothing but a paper screen to keep it out. The houses are heated by charcoal fires in a receptacle called an *hibachi*. In some places—this was not the case at this inn—these are placed below the floor, so that you can put rugs over them, and by putting your feet and hands in underneath you get warmed up—not including your back, however. As a matter of fact, we were not bothered at all. It sounds a great deal worse than it really is.

There was a hot spring at this place, so we were all expected to take a bath. In fact you are expected to take at least two a day wherever you are in Japan. You put on a rather thick kimono with a wash linen lining, which takes away the feeling that you are wearing something somebody has used before you. You don't put on your European garments after your bath, as it is very much more comfortable in sitting on the floor to have a loose kimono, which being padded is warm.

We had a very nice Japanese dinner. The food was Japanese, and we took it right off the bat, and liked it well enough. At the start it is a bit difficult to handle chop sticks, but you get accustomed to it. I could not get used to the raw fish. Most of the other things I liked—if you don't like them at the start you acquire the taste eventually, and the Japanese make you feel perfectly easy about skipping any course you wish to.

That first day 14 cups of tea were served to us. Tea is offered you on all occasions. You can buy it at the railroad station and in the train in a little pot with a cup on top. It is what they call Japan tea; it looks very weak and is served with no sugar or cream.

In that way we saw the Japanese as they are. Back in the country they were particularly friendly; just as nice as they could be, and they did everything possible for our comfort. I could not see the slightest evidence of any antagonistic feeling toward foreigners.



REMAINS OF IMPERIAL HOTEL, TOKYO  
Apartments of Mr. and Mrs. Webster were between the chimneys



FEMALE PILGRIM AT NARA, JAPAN

On leaving the Tone River district we went back to Tokyo, where we had spent only one day since leaving the steamer. After a day or two there we started for the Sho River, where our organization is engaged on a hydro-electric development. The distance was 25 miles longer than from Boston to New York. It took us 28 hours. According to our standard the railroad schedule is extremely slow. You are quite comfortable, and enjoy looking out of the window. It is more interesting to look out a train window in Japan than in any country I have ever been in.

On the Sho River trip we went up in jinrikishas to a little place called Aoshima, which is several miles beyond the end of the railroad. There was a lot of snow on the ground. We stayed in the same kind of a Japanese inn as the one previously described, except that it was much smaller and simpler. But here also we had no difficulty with the food, and we slept well—on the floor.

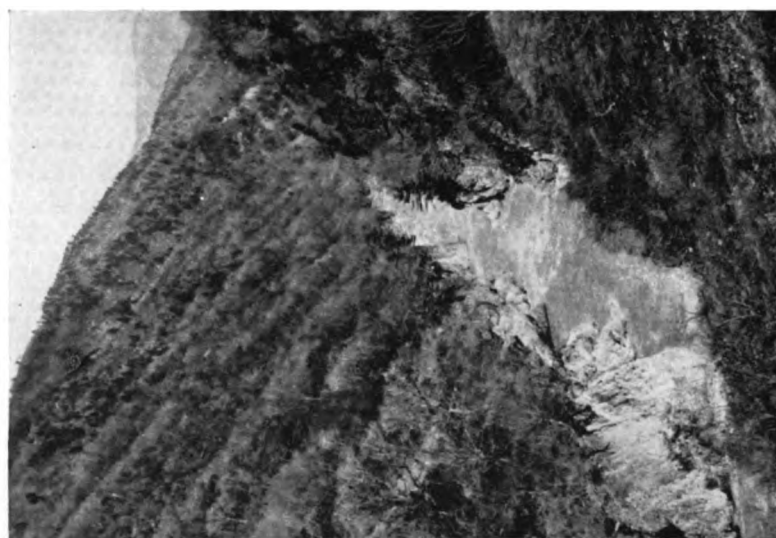
We saw a very interesting sight at this place. The camp is about two and one-half miles up a rocky canyon, and in places along the side of the hills there is a trail that is cut right out of the granite. I remember that when we were once in Pompeii, the Italian guide with great pride showed us the ruts that were worn in the stone flags by the chariots. Here in northern Japan, in a place you never hear of, we saw just as deep ruts in the granite of this trail, made by the little hand carts which the Japanese peasants pull. When Mr. Macy, of our organization, went to this place a year and a half ago he was the second man of American or European blood that had ever been seen in the town. So you get there a view of Japanese life that is pretty near what it was centuries ago. The costume of the people is entirely Japanese. Electric light poles are the only indication you see of American or European civilization; you see them everywhere. We did not visit a place where they were not in evidence on all streets, even in the alleyways. They used to irritate me because they ruined the picturesqueness of many pictures I took.

After leaving the Sho River we went to China, but before describing that part of our trip I wish to make a few general remarks regarding Japan. In the first place 95 or 98 per cent of the Japanese are educated. You see schools everywhere. The Japanese have a very strong patriotic feeling. The chil-





RICE FIELDS, NORTHERN JAPAN



SHO RIVER, JAPAN

dren are taught by heart a patriotic text, something like one of Abraham Lincoln's speeches. I think they have to say it every morning when they reach school. The people pay divine honors to the emperor. In other words, patriotism and religion are combined. The basic religion is Shintoism, which means the worship of ancestors. The Japanese are also Buddhists. You see both Shinto and Buddhist temples everywhere, and I could not quite fathom just where one ends and the other begins. In the two and one-half mile journey up to the camp, of which I have previously spoken, we passed perhaps half a dozen shrines. There is one right near the camp, like a little temple. Every town, in fact, has its temple. Everywhere you see the people kneeling down in front of them, and this was especially the case when we came back to Japan during the cherry blossom season, when the people seemed to be on the move. This combination of patriotism and religion holds the nation together as a concrete unit. There is no evidence of such a union in China.

The more intelligent or educated men that we met in Japan, like the heads of the big industries and the presidents of the banks, are as fine and able men as you will meet anywhere. Your commercial and financial intercourse with them does not differ from that of this country or Europe. But this is not the case when you are dealing with the classes lower down. Your lack of direct experience with the people hampers you greatly. And another point I may make is that it is very difficult for Japanese workmen to do anything except as they have been in the habit of doing. For that reason, it will require a great many more men in a supervisory capacity to put through a piece of construction work where new methods are used than would be supposed.

The labor situation is entirely different from ours. In the first place everyone has a godfather in addition to his natural parents, and the godfather apparently has more authority than the parents. The Japanese has to go to his godfather to get his advice before he makes a move, and as near as I could discover the godfathers, being very conservative, generally advise the man to stay where he is. There is also a system of bonuses. If you once hire a man he is supposed to earn a certain bonus, which is some per cent of whatever he gets. If you should discharge him you would be obligated to pay him that bonus. This sometimes makes an extremely interesting



**30 Kw. HYDRO-ELECTRIC POWER PLANT IN NORTHERN JAPAN**



**JAPANESE GARDEN, KOBE, JAPAN**

situation. If the head of an industry should think of discharging any number of his employees, he would have first to consider whether he could afford to pay the bonuses. Apparently it is sometimes cheaper to keep on employing men you don't want than it is to discharge them. Another thing is that it is much more difficult in Japan than here to get laborers to go into the remote regions. You will probably have to pay them more than the going rates.

The minute a man is out of employment in Japan he goes back to the farm. The country is divided up into very small farms. I think the average is under rather than over two acres, and there is a very strong family feeling. Therefore, you don't see any unemployment. When we were in Japan there was a period of depression. Business was quiet, and they were curtailing in different industries. But the bonus system makes all the industries concerned disposed to hang on to their men. They often cannot afford to let them go.

As we were credibly informed, Japanese merchants are very loathe to take an inventory loss, and up to the time we were there they had a good deal of backing from the government banks. The banks made loans freely to merchants to help carry their stock, and the whole business structure has been held up to war prices, or substantially war prices. It is an interesting fact that one could buy American lumber that was sent from Seattle for very much less than one would have to pay for Japanese logs floating down the river.

Another interesting thing is that a large proportion of the wealth is in the hands of relatively fewer people than it is here. There are big family groups who started their enterprises generations ago with semi-governmental backing, and these families have rolled up wealth on a tremendous scale.

The South Manchurian Railroad was taken over by the Japanese when they assumed control of Korea after the war, together with lines in Manchuria. The railroad is owned one-half by the Japanese Government and one-half by individuals. It is managed privately, is very well run, and is certainly a more comfortable road to ride over than the Japanese roads, owing partly to the fact that it is standard gauge.

Some of our tall engineers would find it difficult riding in a sleeping car on a narrow gauge Japanese railroad. The berth is not quite as wide as I am. You cannot sit up in it, and you



FOOT OF HODZU RAPIDS, NEAR KYOTO



INLAND SEA OF JAPAN

cannot fold up the upper berth, because it is so arranged that everything is fastened to the upper berth and let down from it. There is a space of about two and one-half feet between the mattress and the upper berth. Even a moderate sized person could not stretch out full length in the berth, and you can imagine what the night would be to a six-footer.

The South Manchurian Railroad runs a good many Pullman cars and is perfectly up to date, though the running time is slow compared with our practice. It runs through quite a mountainous country. It occurred to me that the stock of this road would be a fine investment—10 per cent guaranteed by the Japanese Government and coming ahead of every thing else—but I discovered that it was illegal for anyone but a naturalized Japanese to own it.

Every bit of land in Japan, so far as we could see, is taken up. When we were at Tone River we were climbing up over some rocky hills into what looked like a tangled mass of rocks and rough vegetation, and after walking for perhaps half a mile we would come into a little valley which would have a level spot no larger than this room where there would be a rice field. And the next time we would find a valley that was not as wide as this room, but perhaps half a mile long, and that might have 25 or 50 different terraces of rice. Every bit of the bottom of the valley would be tilled with rice, and not a house in sight.

Once, looking at what appeared to be a modern Japanese house (of the kind you might see in the suburbs of Tokyo and different in type from the farm houses we had seen that had straw roofs), we found that it was a hydro-electric plant of 30 kilowatts. We were told that there were hundreds of these all over Japan supplying the country districts. The power from this particular station instead of coming down towards the railroad went back into the hills and lighted the rural community there.

They have had a tremendous industrial development in Japan, and it would seem that their progress from now on would have to be in the industrial line because the land is already fully cultivated. The land we saw that day in the country sells for about \$1,000 an acre. In one particular, conditions are especially favorable to industrial development in Japan. I refer to the great abundance of water power, and cheap power is the foundation of every industrial na-



PAGODA AT NARA, JAPAN



TEMPLE AT NARA, JAPAN

tion's prosperity. Hydro-electric development should mean to Japan in the future what her coal deposits have meant to Great Britain in the past.

We went to China by way of Korea. You go from Tokyo to Shimonoseki, a trip of 24 hours, and consume just about a night in crossing the Strait of Shimonoseki, which connects the Yellow Sea with the Sea of Japan. Our trip on the Pacific was smooth in comparison with this, for when the water would hit the bow and get it way up on end, another wave would hit the stern. Before you actually got spinning in one direction you would begin to spin in the other. I could not sleep much that night, though as a rule I am a pretty good sleeper. Arriving in Korea, we traveled 12 hours by train to Seoul, the capital.

Korea is a mountainous country, and it has been stripped entirely clean of timber. It is the most God forsaken country one has ever seen. It is fertile enough, but you see peasants scraping up dead grass and dead weeds for fuel. They pick up single blades of grass and deposit them in baskets which they carry on their backs. The peasants live in little straw-thatched huts with round looking tops, the huts being built close together. From a distance they look like a cluster of Indian baskets bottom side up with a fence around them. The towns are all small, and the national costume is white. The result is that with no trees and no shrubs you can look over the landscape and see every single Korean, no matter how far off. If you see a line of white dots up a mountainside—you know they are Koreans on a mountain trail.

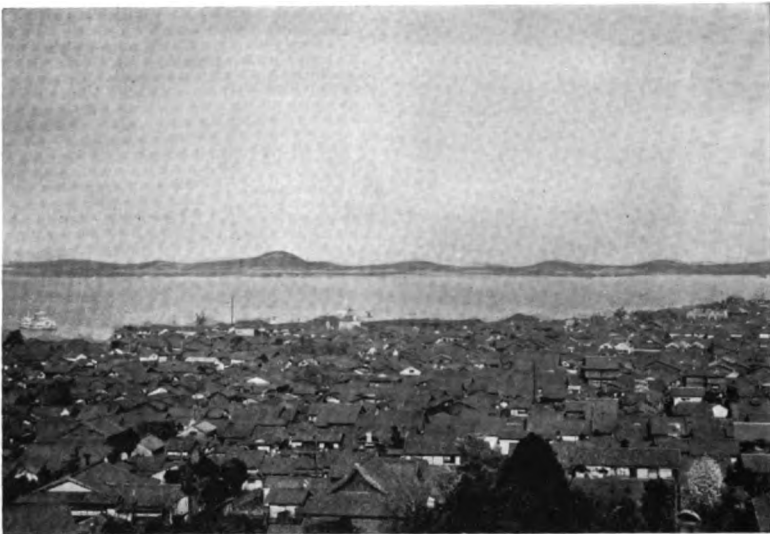
The men wear little hats with a crown of only three or four inches in diameter, which are made of a kind of wire mosquito netting. The men have queues, which they wind up in a little knot on the top of their head, and the hat just covers the knot. We used to call them "bird cages." The women wear white also. They have head dresses of different kinds, which are more or less like the French peasants' head dresses. The people are very poor. They have a hard time to exist, although they look physically strong. It is said that they are very lazy. It is also said that they eat dogs—raw, too. They are said to have a delightful habit of burying old people when they are unable to work any more. I won't vouch for this.

The country is absolutely covered with graves. As you ride through the country I think you are more impressed by





**SACRED DEER AT NARA, JAPAN**



**LAKE BIWA, NEAR KYOTO, JAPAN**

the number of graves than by any other one thing. There appear to be literally millions of them. I think there was not a time when I could not, by looking out of the window, count a hundred. In Korea, they are on the hillside. For ordinary people there is nothing but a mound of earth. The same thing is true in China—just a mound of earth about three or four feet in diameter. The wealthy people both in Korea and in China have monuments, and the most affluent have little tombs around which trees are planted. In fact, about the only trees in Korea or eastern China are those around the tombs. The people respect the graves and do not cut down the trees in the burial grounds. In Korea nearly all the graves are on the hillsides in order not to use up land that can be cultivated. Every bit is put under cultivation, just as in Japan, but not as carefully. The natural resources of Korea are being developed by Japan. Coal mining, the manufacture of iron and steel, and allied industries are being energetically pushed.

We spent an interesting day in Seoul, and then took a 24-hour ride to Mukden. I have never seen such a sudden change of people and customs as when we crossed the river from Korea into China. Everything we saw in Korea seemed pretty uniform. Generally when I have crossed from one country into another I should not have known I had done so if there had not been a boundary post. Here the very first house you saw was radically different. It was built of stone or mud with a flat roof. The Chinese costume was black instead of white. The appearance of the villages was entirely different. There was a perfectly defined line—the people of the two countries apparently do not mix at all.

We spent one day in Mukden. Here the editor of the *STONE & WEBSTER JOURNAL* suffered, as he thinks, a great loss. For I had taken a picture of a horse-car in Mukden drawn by three little white Mongolian ponies, which could not have been over thirteen hands high, driven abreast. But when I got back to Tokyo it was burned up in the Imperial Hotel fire.

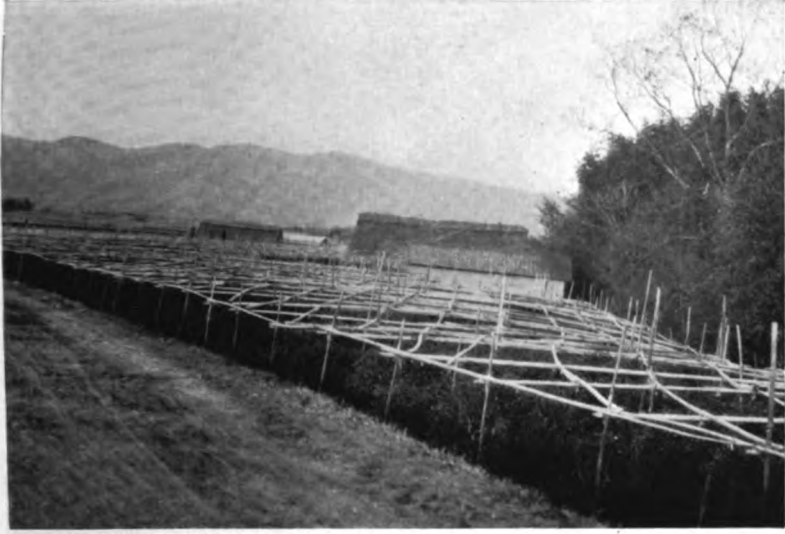
I was rather surprised to find that Mukden still locked its gates at night. It was the first city we encountered where this occurs. The gates are locked at nine o'clock and no one can enter or leave the city. Mukden seemed a pretty wild place, and I should say that it was a good thing to lock the gates. I



INLAND SEA OF JAPAN



SITE FOR HYDRO-ELECTRIC STATION IN NORTHERN JAPAN



**TEA PLANTATION NEAR KAMAKURA, JAPAN**



**RICE FIELD, NORTHERN JAPAN**



COUNTRY NEAR SOOCHOW, CHINA



CITY WALL AT SOOCHOW, CHINA



LANDSCAPE NEAR SOOCHOW



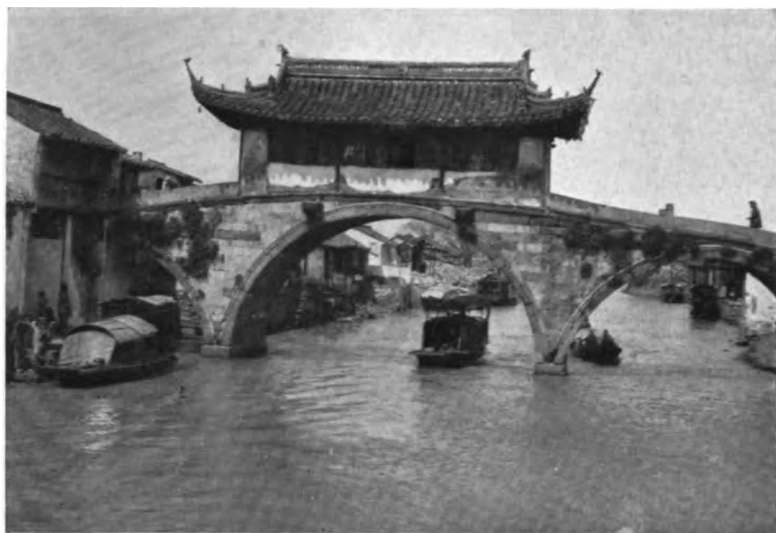
NEAR SOOCHOW



CANAL AT SOOCHOW, CHINA



GRAND CANAL AND CITY WALL, SOOCHOW



ON THE CANAL AT SOOCHOW



QUAINT SPOT ON THE CANAL AT SOOCHOW





**BRIDGE OVER BRANCH CANAL, SOOCHOW**



**TRAFFIC ON CANAL AT SOOCHOW**

went out once for a walk with my family. Our hotel was two miles outside the walled city in a big square brilliantly lighted by electricity. I told a man connected with the South Manchurian Railroad, who acted as a sort of guide for us, that "we should like to take a walk." He displayed no enthusiasm, however. The square was so brilliantly lighted that I thought it would be all right, but the minute we went out we were surrounded by I should say 50 jinrikisha men and all kinds of coolies, hollering and yelling and staring at us as hard as they could. Before we had walked 200 yards, I turned around, but the crowd walked right along with us up to the door of the hotel. We could not shake them.

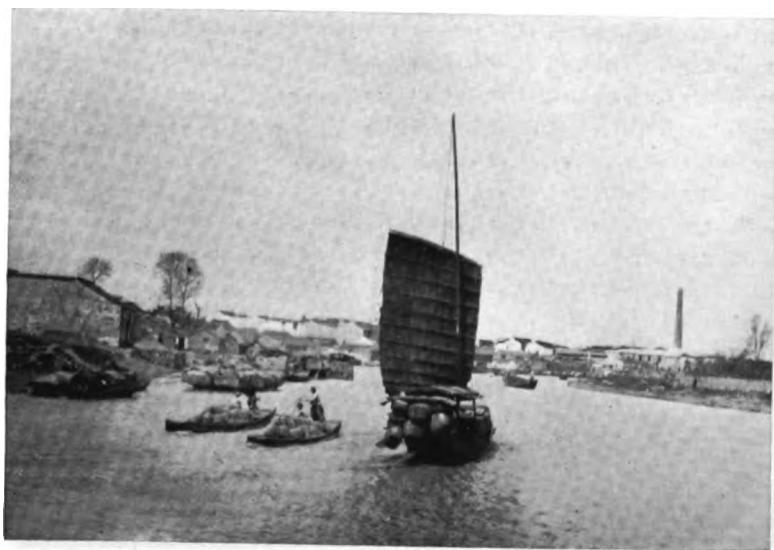
We went from Mukden to Peking, and stayed there for a couple of weeks. I think Peking is today perhaps the most interesting international centre in the world—since Constantinople has been on the decline. You see people in Peking from every quarter of the globe. There is a fine hotel and the city has more walls, I suspect, than any other in the world. The gates are shut at night, too.

There is one thing about Peking which may surprise you. There are no street cars there. Probably 80 per cent of the traffic is handled by jinrikishas and Peking carts, little two wheel carts with a top like a prairie schooner, drawn by a donkey. There are little glass broughams about half the size of our broughams. This vehicle is drawn by a Mongolian pony, with a Chinaman sitting on a high seat, and another standing on the rear axle. When they get to a corner the footman behind jumps off, runs up and leads the pony around the corner. He also leads him if there is any other steering to be done. You also pass caravans of camels.

Peking is the seat of the central government. But before we went there the power had largely passed from the civil authorities to the Tuchuns, or military governors. Each province had a military governor, but in a good many cases they combined, so that there would be one for every two or three provinces. Chang Tso-lin was the war lord of Manchuria. He was military governor of three or four provinces north of Peking. You saw his troops everywhere, at Mukden and at every railroad station. On the way from Mukden to Peking our train was boarded by a Chinese general and his staff, the staff being so numerous that they absolutely filled the dining car. We stayed in the diner because in Chinese



**ALONG THE CANAL, SOOCHOW**



**JUNK ON CANAL AT SOOCHOW**

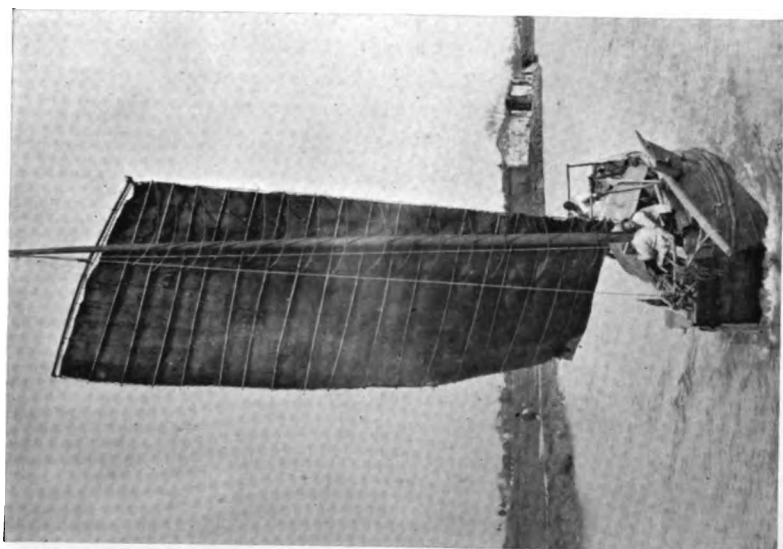
sleeping cars the small windows are not opposite the seats. (The berths were big enough and comfortable enough to sleep in.) The general and his staff boarded the train in the afternoon. From the way they talked to the conductor we thought they were going to murder him. They apparently expected something he did not have—a private car—so they took the diner and filled every seat. They sat on the tables and on the backs of the seats, and as a whole made themselves quite disagreeable. It was Lord Northcliffe, I think, who after a trip through China, said that the national pastime in China was spitting. Well, the general's staff indulged in this pastime to the fullest extent, driving us back to the sleeping car. There was one big body guard sitting in the middle of the aisle, filling it completely. As he did not move we had to step over his shoulder when we left the car.

They carried their treasure in a canvas bag, held by two men. When it hit the floor of the car it sounded like a million dollars. I supposed that it probably was silver amounting to a good many thousand dollars. I afterwards learned from the train conductor that it was two hundred dollars in coppers.

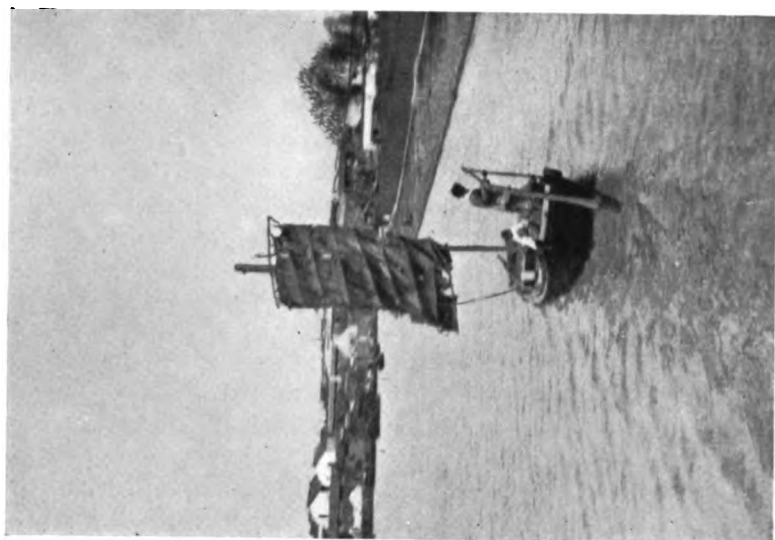
We went back to the dining car for our dinner, but it was extremely disagreeable. They stared and kept up their national pastime, and we could have wished that we lacked the sense of smell. Thank heaven! we were not disturbed that night. I understood that there were four attendants on our car who slept on the floor across the doors at either end of the car. We felt we could not eat breakfast in the diner, but they served us a very good repast in our apartments. (We had been put in the car next to the diner.) We were very much surprised by the food we had on that Chinese dining car. It was better than we get between New York and Boston—just as good as the best western dining car.

I have said that the government of China is by provinces. There are over twenty of these. They have a civil government, and formerly a certain proportion of the land tax went from all of the provinces to the central government. Then, too, the central government had the surplus earnings of the railroads over and above the interest on the bonds and the sinking fund requirements. And it had also some surplus from the customs and salt taxes. The customs and the salt industry are under foreign jurisdiction.

They were beginning to have some difficulty in collecting



CHINESE JUNK, GRAND CANAL, NEAR SOOCHOW



CANAL AT SOOCHOW

the salt tax, because it comes from the interior provinces, and when we were there one province was holding up \$100,000. On the whole, however, the salt tax is coming through pretty well. Chinese government loans that are based on these two taxes are, therefore, perfectly good.

So the general government received part of the land tax, some surplus of the customs, whatever surplus there was on the salt, and the surplus of railroad earnings: combined, that was enough for it to carry on its activities.

Then the land tax stopped coming. The local governments or the military governors kept it. Business was very poor. There was very little surplus from the customs, and the same was true of the salt tax. The result was that the central government ran out of money. Government employees were way behind in their pay, the school teachers did not receive their salaries; no interest has been paid on any bonds except those taken care of by the specially allocated taxes.

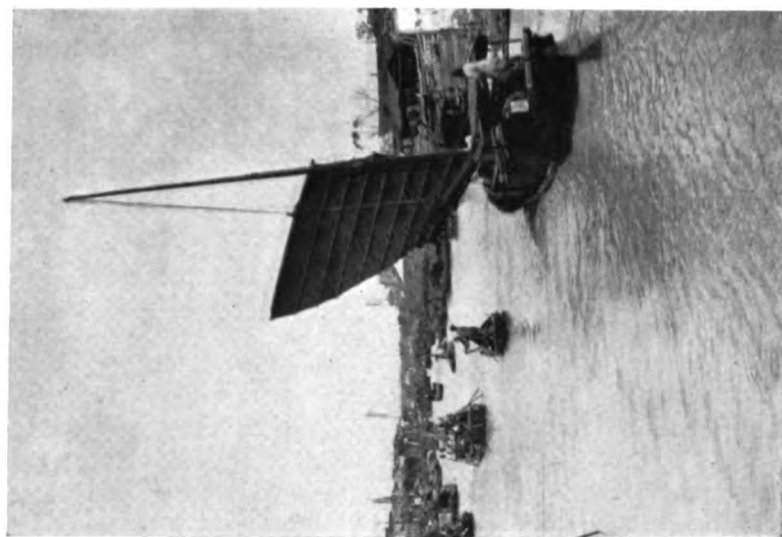
I was told in Peking that Wu Pei-Fu was by all odds the best military commander in China. It looked at one time as though he might be crushed, as he was in between Gen. Chang Tso-lin in the north and Dr. Sun Yat-Sen in the south, and was military governor of only two provinces. But he made short work of the former, and, as you know, the latter has been dispossessed at Canton. Wu Pei-Fu is said to be the best of the military governors, is patriotic and is honest.

The fundamental thing about China is this: They have a population of four hundred million people, 90 per cent of which are estimated to be illiterate, with very little patriotic feeling and no visible general religious feeling except the fear of devils. For these four hundred million people there is no real system of transportation, a large proportion of the traffic being handled by canals. The language and currency in each province are different. With these broad facts in mind, it is hard to surmise just what sort of a government can hold them together. In the old days they could worship the emperor with what religious feeling they had. He could instil fear into them by judiciously cutting off heads (which he did), and the combination of fear and worship held the nation together in a loose way.

It is an interesting fact that a very large proportion of Chinese houses are built with a "devil's screen" before the



JUNK ON CANAL AT SOOCHOW



ANOTHER TYPE OF JUNK AT SOOCHOW

door. They think that devils can travel only in a straight line. So Chinese houses, even those occupied by European and Americans, have these devil screens, two or three times as wide as the door, the theory being that the devil cannot get through the screen, and cannot turn the corner to get in through the door.

Hankow surprised us more than any other city. You think of it as a spot on the map, but Hankow and the cities that adjoin it across the river, and are a part of the commercial centre, have over one million people. They call it "The Chicago of China." We arrived there in the morning and went to the hotel in an automobile. Everywhere were French signs, in the same blue and white enamel you see in Paris. We were in a French concession. Certain areas are allocated to foreign governments. The French concession is a French city, the English concession an English city, and the Russian concession a Russian city. These concessions cover the whole river front for about a mile and a half, and from the river they look like an European city. But the moment you get beyond them on either side you are in purely Chinese territory. There are little narrow streets, low Chinese buildings, and all the things that go with the Chinese.

Just before we left Peking, we were entertained at a very pleasant luncheon given to Mr. Muhlfeld and myself by Dr. Yen, the acting Premier of China. There were present representatives men from the central government, a good proportion having been educated in America. Quite a number of them spoke English fluently, and it was very interesting to get their views on the internal situation. All of them were optimistic in regard to the eventual outcome, but felt that time and patience would be required to get matters really straightened out.

We were very much pleased to hear the next day that the Minister of Communications had placed at our disposal a private car for our trip to Hankow. As it takes 36 hours, this made a great difference in our comfort, and rendered the trip a very pleasant one.

There was one thing that I never expected to see. It was when we passed the Yellow River on our way south to Hankow. All Chinese cities of any size have walls around them, with moats and parapets, but in the medium sized cities they have mostly gone to rack and ruin. South of the Yellow





CITY GATE, NANKING, CHINA



CITY GATE, NANKING, CHINA

River, however, we saw hundreds of Chinese rebuilding these walls to full strength, with moats, parapets, loopholes and the like. Every town was having its walls rebuilt. We saw soldiers everywhere, and you had a feeling that something was going to happen. The reason for rebuilding the walls was not so much that the people were afraid of a siege, as that when a Chinese army is defeated the troops generally turn into bandits. They cannot get any more pay from the defeated general, and the only way they can live is to subsist on the country. This takes your thoughts back to medieval days.

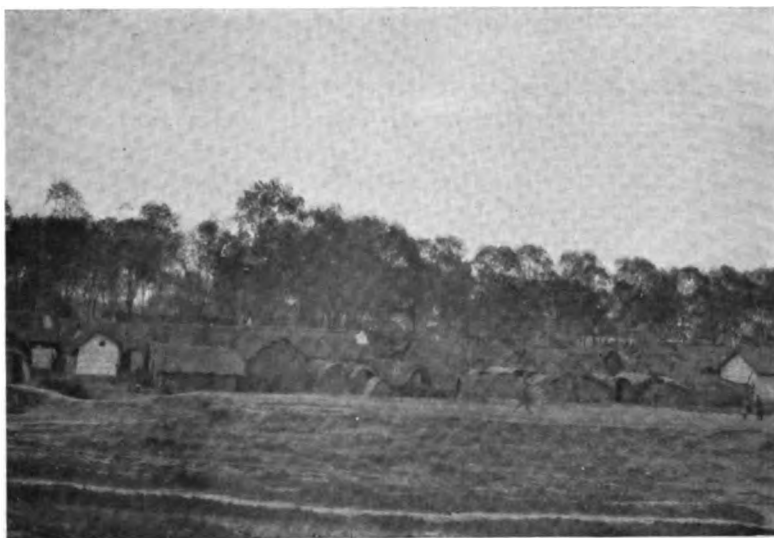
From Hankow we went down the Yangtse River, and found it tremendously interesting. We made the trip on a boat that looked something like a Sound steamer, and were three days aboard. Thousands of junks were passed. Many looked like Columbus caravels; they were probably building them thousands of years before Columbus sailed for these shores and they have never changed. We counted 55 of these junks in one place. I should say that we were not in any place where we could not count 25 or 30 in sight.

The Yangtse River is navigable for about a thousand miles above Hankow. In this particular region there are seventy-five million people, with no railroad facilities of any kind. Water is the only means of transportation. There would be no occasion for famines if they had good transportation. It would seem, therefore, that when the Chinese have a strong, stable government there will be the most wonderful chance for development that could be found anywhere in the world; but the fly in the amber is in the fact that nobody knows when that is going to be.

There is one more thing of which I must speak. When we were in Peking we saw only the government side of things. We saw the troubles of the government and we also saw the troubles of our American and European friends there. Every big business in China has a collection agency in Peking. Everybody there was trying to collect money from the government. They were all blue because there was none to be got. You saw that side of it. Yet, we were amazed in Hankow, and still more so in Shanghai, to find that these large commercial and industrial businesses were going on pretty independently of the government. Business was poor, because it was poor everywhere, but the cotton industry, and the shipping industry, and some of the allied industries seemed to be



**RICE FIELD IN NORTHERN JAPAN**



**CHINESE HUTS**

doing business quite irrespective of the government. There were interruptions and menaces, of course, arising from the impecuniousness of the military commanders. But in Shanghai and Hankow, where American and European gunboats are accessible, business in the foreign concessions goes on smoothly.

As I have said, there are four hundred million people in China. There is a total debt, however, of less than one billion dollars—less than one-fifth of our last Victory Loan.

Fundamentally, I feel optimistic about the ultimate outcome in China. In what I have been saying I have intentionally pointed out the dark side, because I think it is well to know the worst of the situation with which you are dealing.

The Chinese are optimistic. They believe they are going to get things straightened out, and I have no doubt they will eventually. The educated Chinese are charming people. We saw a great many of them. There is a Tech Club in Peking. They gave us a dinner at the Chinese Naval Club. There is a Tech Club in Shanghai also, and we had a dinner there. We met a great number of fine young Chinese who have been educated here, and their wives.

Though it looks to me as if it would take some time to straighten out the Chinese situation, I feel that certain commercial enterprises could be profitably started there even under present conditions.

## Measurement of Fuel and Oil Supplies\*

BY TOM P. WALKER

**D**URING the year 1921 out of every dollar that was spent in the operation and maintenance of all departments of the Haverhill Gas Light Company, fifty-one cents were spent for coal, coke and oil. Two pieces of apparatus—the steam boiler and the gas generator over at the works—hold the balance of power and match their greed against all the outward and visible signs of grandeur and strength which signifies to the world, The Gas Company. The comfortable support of a hundred families, plus the operation of seven automobiles, added to the maintenance of spacious buildings and pretentious offices, all these and much more, cost less than those three items—usually grouped as “Fuel.” May we not then consider seriously our methods with these materials and seek to search out, if possible, a means of making their accounting more effective and more truly representative.

The proposition of periodic and systematic inventories of all supplies needs no serious presentation to this meeting. In most of our departments the yearly or semi-yearly stock taking is as well established as the principle of a two week's vacation. Inventory season in our stockrooms is made the occasion for no end of ceremony. All hands turn out some bright Sunday and with loud voice and deep concern each separate fitting is carefully tallied off—each stove enumerated—each bulk lot meticulously weighed—and the record so established is guarded as jealously as a bundle of Liberty Fives. The auditors fondle these papers, they check and cross check—add, multiply and peruse—then argue and correspond and once approved they are set up as facts indisputable.

Did you ever see an auditor check up a pile of coal? Have your fuel records, those original records which go to make up the monthly manufacturing statement, ever been examined? Probably not. And why? Is it not because a fuel supply cannot easily be reduced to a concrete common denomination that it is neglected generally with the happy attitude that “it can't be done?” But please remember that expenditures for fuel represent fifty-one cents out of every dollar spent.

\*A paper at the Fourth Annual Meeting of New England Companies under Stone & Webster management, at New London, Conn., June 28, 1922.

My subject is the "measurement of fuel and oil supply." A perfectly plain and clear premise—yet a moment's thought will suggest a number of dependent factors each with its ramifications and, therefore, it will be difficult to exclude digressions entirely. As a matter of fair play I must warn you now that I cannot hew closely to my thesis. In a general way I shall attempt to show what some companies are doing in this respect, and what results can be obtained by conscientious attention to a few simple principles.

Our first record of a coal shipment is that a certain car that weighs a given number of pounds has left the mines consigned to our company. In the hand of some railroad several hundreds of miles away it is ours, as is, and from the invoice we must set it up in our supply account as that given number of pounds times an agreed price. But before this coal becomes a part of our operating reserve, a few tons may have leaked out through a defective hopper or perhaps a hole in the side of the car originally stuffed up with a gunny sack. A few hundred pounds more have been kicked off the top by small urchins who later reclaim it from the right of way—and when that car is dumped in a large pile with many more similar cars, it is any one's guess how much remains.

Let us leave that coal in a vacant lot for a month or two—or a year or two—while we use from regular shipments. Then some day due to a strike or a washout on the main line we turn to our stock pile for assistance. We dig into it for a month, and find that instead of an additional month's supply as our books attest, we have none. Our stock pile is short—way short, and the company's net goes into the red for a month or so and then we breathe a questionable blessing on the fellow who said that "Figures don't lie."

Accounting for coal is not a matter of figures solely—it is first a state of mind—then a sympathetic consideration of past experience and then figures applied as thoughtfully and carefully as possible.

In order to obtain as broad a slant as possible on this subject and also that I may not need to tax my own thought unduly, I sent out a questionnaire to most of the companies under Stone & Webster management, and many outside the organization, which touched on various phases of this matter of fuel inventory. While I have been asked to present as concisely as possible the method which we have employed at

Haverhill, I should like to ask that you consider with me hastily the information which my questionnaire disclosed. Perhaps we may best group the material as follows:

1. Attitude toward the subject.
2. Data upon which method used must be based.
3. The method and its application.

In the first place there seems to be no unanimity of opinion as to the frequency with which measured inventories should be taken. On one point there is no quarrel and this is that to use up a consignment of coal completely gives the best possible check on book values. Several companies rely entirely upon this method and during normal times, when markets are responsive and a sensitive regulation of shipments is possible, this means can be controlled so that periodic checks are possible. During the changing conditions of these past few years, however, when operating reserves have been very heavy, many of the exponents of this plan have found it impossible to clean up entirely and there have been no inventories. While this scheme for checking book values is undoubtedly the most conclusive, it cannot be supported unless it furnishes frequent comparisons.

The Brockton plan depends upon this idea and is being applied very satisfactorily on bunker coal. Here they are so fortunately situated as to be able to store in one bunker while using from another so that one shipment is completely exhausted before the next is touched. In going a step further; however, and applying it to their storage pile they find that it is necessary to use from storage and store at the same time, thus making two handlings, where by using directly from shipments and leaving the storage pile intact, only one handling would be necessary.

There are those who prescribe that measured inventories be made when stocks are low and others who reduce stocks yearly so that a measure of diminished stock may be made. They do not, however, prescribe periodic measurement and more often than not they are not made yearly as planned. The usual answer is that the measurement is nowhere near accurate anyhow, therefore, but little harm is done.

The point I have in mind is this, that we have no rigid principle to tie to, and as a consequence a very skeptical and indifferent attitude prevails. It is very necessary first, therefore, that we determine to give this matter the careful

thought it deserves and school ourselves to apply some system which adapts itself to local conditions as conscientiously as we handle stocks of fittings or stoves.

Now to take up the second phase in developing our method let us consider the data upon which our choice of a method must be based.

It has been demonstrated that always there will be a discrepancy between an amount of fuel invoiced at the mines and that same fuel as charged off on the plant scales for record on the financial sheet. Invariably this discrepancy shows a shortage in stock, and the simplest method of prorating the loss is through some percentage correction applied somewhere along the line to our fuel figures. The fixing of this percentage should be an important feature of fuel accounting and it can only be made through experience. Once made, it should be continually subject to revision according as inventories show its adequacy. Percentage allowances reported to me from the various companies varied from 0.5 per cent to 7 per cent.

The method of applying this figure is not of great moment. Whether you reduce your invoice weights immediately to get book value, whether you reduce them an amount which represents transportation losses and then increase the amount used by a percentage which represents storage shrinkage, or whether again you apply the whole correction upon fuel used as weighed on the plant scales, has no effect whatever upon the results you will obtain.

I believe that the accepted method and the best method is to enter fuel received at the invoice weight and apply the correction to the weighed amounts to be reported on the monthly manufacturing sheet from which the expense items are computed.

This adjusting factor has no bearing whatever on the moisture correction made on generator fuel in water gas sets which is applied solely to allow a comparison of operating efficiencies and has no connection with the financial report.

The next item to consider is the means for determining the amount of fuel used in the various generators, benches, and boilers. Some scheme of weighing each charge should be provided and estimates should not be tolerated. Whether platform scales, weightometer, hopper scales, or any of many means are used, they should be frequently calibrated because



errors are cumulative. It is excellent practice to have the local sealer of weights and measures make periodic tests and adjustments. Tare weights also should be frequently scrutinized, and if several larries or barrows are used, they should be brought to a uniform weight by attaching lead slugs to the lighter ones.

The preceding discussion has dealt only with purchased fuel and applies equally to rail or barge shipments. Coke, however, which is made in the coal gas benches cannot conveniently be weighed while hot, and after quenching, the water content is so great that weighing would be futile. The frequent practice is to assume coke made to be a certain percentage of gas coal carbonized and deduct a percentage figure for that used in the producers, and also an allowance for incident breeze. These percentages should be determined periodically by storing a given production separately and weighing after the quenching water has had an opportunity to evaporate. According to information which I have from 66 to 72 per cent of coal carbonized should be returned as coke and of this amount about 20 per cent is used in the producers, and from 10 to 20 per cent becomes breeze.

The final item to complete our data inventory purposes is the unit weights to be applied to the cubical contents of a coal pile in order to estimate its weight.

Several methods present themselves:—One may measure up a stock pile that contains a known weight of coal and thus determine his unit under actual conditions. Other methods are to weigh up railroad cars, trucks or carts filled and leveled off and compute their volumes. As a last resort a box of sizable dimensions (never less than 10 or 15 cubic feet) leveled off and weighed will furnish a fairly satisfactory figure. A great deal depends upon the care with which this unit is determined, although if frequently checked the average error which accrues can never be large.

To give a schedule of unit weights would serve no useful purpose. There are so many kinds and conditions of bituminous coal and coke that each must be determined separately and checked frequently. Kent gives average figures for standard coals and I fear that too many of those now being used were cribbed from him or some other source. Factors furnished by the Peoples Gas Light & Coke Company, of Chicago, seem fairly representative and carefully worked out, and I include them merely for their interest:

Retort Coke . . . . .	70-75 cu. ft. per ton
Works Size . . . . .	65-70 cu. ft. per ton
Medium Coke. . . . .	65 cu. ft. per ton
Furnace Coke. . . . .	65 cu. ft. per ton
Stove Coke . . . . .	60-65 cu. ft. per ton
Coke Breeze . . . . .	65 cu. ft. per ton
Bituminous Coal	
Lump . . . . .	35-40 cu. ft. per ton
Screenings . . . . .	32-36 cu. ft. per ton

If the application of a correction factor either to invoice weights or to fuel as weighed at the boilers or generators will furnish an answer to this problem of fuel shortages, our proposition resolves itself into the proper determination of this factor. It is a variable quantity, of course, and never can be exact. It can be made to approximate conditions, however, if frequent and regular measured inventories are made. Neither can these measured inventories ever be exact, so that we are dealing constantly with figures over which we cannot swear our lives. Do you remember Horner's method for factoring an algebraic expression? (I didn't either until I looked it up.) By Horner's method we substitute for the unknown some factor and if the expression does not vanish we continue to substitute different values until at last we find one that does cause the expression to vanish or at least come within the desired range of accuracy. The essence of his method is the constant and intelligent application of some value for the unknown and whether the problem be of the second or fifth degree, the method is the same, except that the process may be somewhat more tedious.

Our problem is the determination of an unknown correction factor which, when applied to the weights of coal put into our boilers and generators, will cause surpluses and shortages to vanish. But instead of a hit and miss factor we may constantly assure ourselves approximately of its results by a measured inventory. Just as the essence of Horner's method is to try then try again, so the essence of this inventory problem is to inventory, then inventory again, regularly, frequently and with the happy knowledge that it can be done.

The determination of a pile of coal is simple mensuration, but as the pile increases the methods used and the preparation should be made more elaborate.

Every company should have accurate data on all bunkers

or spare land where the storage of fuel is possible. Bins may be graduated much the same as an oil tank and the measurement made as simple a matter as casual observation. The contour of the floor of bunkers and outside storage should especially be recorded for once covered up they will be hidden until the need of an inventory has passed. Of course, where there are obstructions such as trestle work, etc., they should be recorded. A little care in piling regular shapes assists greatly when inventory time comes around.

One very likely mistake in this connection is the tendency of most engineers to be far too meticulous over minor details. One never approximates within three per cent and his answer cannot be in fractions of a pound. The secret of successful inventory does not lie so much in the scientific accuracy of its measurement as it does in its frequency. Any one can shoot a deer if he fires enough shot in that general direction (providing the deer is tied to a post—and believe me this matter of fuel shortage is tied right to your front door.) All the while he shoots he is constantly developing into a better shot.

A small storage pile (say up to 1,000 tons) can be measured with a steel tape. Whether piled regularly or not, it should be divided into small sections of fairly regular shape and each section measured separately. These sections should not necessarily be slices made perpendicular to the main axis—but rather should be made by taking off a triangular prism here, a trapezoidal shape there, a rectangular shape there—until section by section the pile is gone through. By this method cumulative errors are minimized (unless it be that the tape is not correct) and the usual mistakes tend to average up.

Bunker and bin coal should also be measured in this manner, except that after taking off the irregular shapes around the main bin, a large section may usually be measured as a regular geometric solid.

Larger storage piles require methods commensurate with their size and condition. Usually a level can be used to good advantage and often a transit is necessary.

One method takes off cross sections every ten feet perpendicular to the principal axis and computes the volume by applying some appropriate geometric rule.

Another method is to get the areas in plan by survey and

plotting at several different levels, or contour lines, and determine these areas with a planimeter, or by some other means, summarizing to find the volume. Any engineer can be trusted to select a method.

As I have pointed out before, any method short of pacing off distances, and gauging heights by the vest buttons, will serve some useful purpose provided it is applied regularly and frequently.

The weight of the fuel in question is the product of the volume as measured above and the unit weight determined upon.

Correction factors to be applied to fuel used should not be changed to conform to each separate inventory, but should follow tendencies over reasonable periods. If it is found that during a year with a correction factor of two per cent on coke there is a one per cent shortage, the factor may well be increased to three per cent. If after two inventories serious shortages or overages are shown, the factor should be increased or decreased accordingly.

Inventory adjustment reserve accounts, however, should reflect the results of each inventory. It may be way up one month and way down the next, but the average will tie pretty close to actual facts, and never can there be that hopeless sensation which comes with a realization that a handsome fuel reserve is nothing more than an empty lot.

In the final analysis the only true inventory is the complete using up of the stock. At least once each year all stocks should be turned over, so to speak, thus supplying a supplementary check on our correction factor and inventory methods. It is not usually difficult to turn over bunker fuel, but once coal or coke is placed in safe (and often somewhat remote) storage, there is a disposition to let it lie until an emergency arises. This is not best practice and it is well worth the extra expense necessary to completely consume each shipment yearly. If three months' storage is carried, make it in three piles, and use one of these piles each fourth month. Or else, perhaps, it is feasible to reduce the reserve supply during one season of the year. In that case fire the plant during the spring on storage fuel and spend the summer building up a reserve.

This extra hauling means expense, of course, and no conscientious operator can tolerate waste, yet is it not true that

your directors—your stockholders—your commission and your customers, too, will scarcely question a slight increase in fuel cost, but should you ask for several thousands of dollars from reserves and surplus to make up a fuel shortage, you bring down multiplied troubles on your head.

In conclusion may I make more emphatic, if possible, the absolute necessity of regularity in this matter of measuring fuel stocks. Granted that your measurements are not accurate, that your correction factor is only a wild guess and again that your unit weight is in error—the volume of the pile is constantly diminishing, and when it becomes very small, the actual tonnage error is likewise very small and slides by practically unnoticed.

The matter of oil inventories may be disposed of in a few words, and this because oil will insist on piling itself properly. If we were able to store dry fuel in as regular shapes as we do oil, I should never have had to prepare this paper.

There is one secret about making oil inventories—make them every day. Each morning when the plant clerk makes the rounds of the charts and meters he should drop a tape into the oil tank and determine his daily consumption from this actual inventory rather than from the oil meters. We use our oil meters only to indicate the amount of oil introduced each run, but do not consider them in our operating tabulations.

The measurement of oil in a tank is so simple a matter that it needs no presentation. There is one refinement, however, that may at times be necessary and that is the correction for temperature changes. All of us who measure oil daily, I am sure, have had to account for some astounding results by a very sharp change in temperature between readings. We, in Haverhill, do not make temperature correction and for general practice I do not think them necessary, unless the storage tank is a particularly narrow one so that slight changes are magnified unduly. The co-efficient of expansion of any given oil should be obtained from the refiner when some special condition makes correction advisable.

As it comes time to close, I'm wondering if this matter of periodic inventories is not akin to that much cussed, discussed, and recussed subject "Public Relations." Is it possible that we must be able to prove every single act with a micrometer before we accept it as a serious problem?

Just as most of us are loath to readjust our business policies, because the reaction on *hoi polloi* cannot be measured in savings during the first and second years—so are we apt to consider lightly this matter of regular inventories, because when made they can be picked to pieces even with so delicate a tool as a crow bar. If the answer to this sort of a problem cannot be found on a comptometer and checked with a slide rule, should we not compromise with accuracy and throw the unexplained deficit into some account which we might call “expediency?”

## Conditions In Stone & Webster Territory

*The managers of the companies operated by Stone & Webster, Inc., write to the Management Division of Stone & Webster about the first of each month with reference to conditions in their respective localities during the preceding month. A digest of these letters is published each month in the Stone & Webster Journal.*

### GENERAL NOTES

MR. RUSSELL ROBB is away from the office on his vacation.

The Truckee River General Electric Company has acquired and will operate the properties formerly operated by Hunter Creek Water Company and Reno Power, Light and Water Company in addition to those heretofore operated by the Truckee River General Electric Company.

MR. HOWARD L. ROGERS and family sailed from Montreal, May 30, on the C. P. R. steamship *Empress of Scotland*, for Europe.

MR. F. S. PRATT and family sailed from Boston, June 24, on the White Star Line steamship *Pittsburgh* for a European trip.

MR. and MRS. H. H. HUNT celebrated the 25th anniversary of their marriage on June 8, and MR. and MRS. F. S. PRATT commemorated a similar event on June 10.

MR. HENRY R. HAYES, of the New York office, was in Boston, July 6.

MR. J. L. ALEXANDER, manager of the Keokuk Electric Company was in Boston during the latter part of June and the first part of July.

MR. L. H. G. BOUSCAREN, of the Chicago office, was in Boston office during July.

MR. F. H. ARCHAMV has joined the Purchasing Department and has been appointed electric inspector with headquarters at Pittsburgh, Pa.

MESSRS. R. E. ARGERSINGER, M. J. LOWENBERG, W. R. McCANN and H. B. WOOD, of the Engineering Department, attended the N. E. L. A. Convention held in Niagara Falls, N. Y., during June.

MR. S. B. PHILLIPS, formerly with the Construction Department has become a member of the Structural Division of the Engineering Department.

Thirty-seven different educational institutions are represented by graduates employed in the Engineering Department. Massachusetts Institute of Technology leads with ten representatives, with Cornell University second, having five.

MR. D. J. FINN, of the Statistics Department, will be away during the summer on extended leave of absence.

MESSRS. LIONEL J. BOURKE and RUDOLPH A. WEISBRICH, Texas A. & M. College, 1922; ALAN W. HASTINGS, M. I. T., 1922; and E. CAREY KENNEDY, Tufts College, 1921, Boston University, 1922, have joined the Statistics Department.

MR. NORMAN A. LOUGEE, M. I. T., B. S., 1911, M. S., 1912, joined the Engineering Department as engineer in the Electric Division, on July 1. MR. LOUGEE has been intimately associated with DR. STEINMETZ and has been particularly interested in all phases of lightning arrestor development.

MR. REGINALD G. BURR, of the Statistics Department, has recently suffered bereavement by the death of his father. MR. BURR will shortly go to Ponce, P. R., as student engineer of the Ponce Electric Company.

MR. FRANK L. AHEARN, of the Statistics Department, is receiving congratulations on the birth of a son.

Boston office members who had an opportunity to compete for the prize offered by Mr. G. W. LEE for a translation of an Esperanto sentence, will be interested to learn that the prize was awarded to a non-member of the organization, Mrs. E. A. Codman, of Ponkapoag, Mass.

The Boston members of the BULLKONEY CLUB have recessed from May 18 to September 30, 1922.

On July 10, Mr. Eliot Wadsworth, assistant secretary of the treasury and a former member of the firm of Stone & Webster, was married to Mrs. Nancy Scull, widow of Maj. Guy H. Scull.

#### BATON ROUGE, LA., JUNE 24

The Standard Oil Company is at work on additional pipe lines which will materially increase the capacity of the local refinery. So far as we have been able to determine the refinery is running at its present full capacity.

Wholesalers and retailers in all lines report excellent business for this time of year, and are looking forward to a normal fall business.

The month of June promises to be the best month we have had this year. Power station output is running about 10 per cent over the estimate, and 20 per cent over last year, and railway earnings are appreciably over the estimate, and slightly in excess of last year. Gas send-out is under the estimate, but because of improved operating conditions the balance for the month should equal the estimate.

Apparently Baton Rouge is well over the depression of the past few months, and with all danger from high water having passed, and with prospects of good crops in sight, the outlook for the future is very favorable.

A good deal of building is going on, both commercial and residential. A four story addition to the Raymond Building has just been completed, and two other buildings are in process of construction on Third Street. The Singletary Building is being thoroughly remodeled, and should make another fairly modern office building. Four new schools are being built in various parts of the city. A great many houses are going up of a rather better class than has prevailed locally heretofore; most of these houses are in the suburbs, but within reach of existing light and power lines.

There is little change as to labor and employment conditions. Although there is no serious unemployment situation, plenty of negro labor can be had at from 25 to 30 cents an hour.

MAURES H. FAURES, assistant superintendent of distribution, has returned from College Station, Tex., where he attended a short course for electric metermen which was given by the Agricultural and Mechanical College of Texas in co-operation with the Southwestern Electrical and Gas Association. While on his trip, Mr. FAURES visited the Stone & Webster Companies in Galveston, Houston, Beaumont and Port Arthur.

On June 19, a dinner was given in the private dining room of the Hotel Louisiana for all employees of the gas department. This was the first get-together of the employees of the gas department since the arrival of Mr. PIERSON from Columbus to become gas superintendent. J. J. DOWLING, gas engineer, gave a very interesting talk in connection with the meter situation in Baton Rouge.

MISS EDWINA RATELLE has been employed as clerk for the gas department.

E. M. MORROW has been employed as salesman in the commercial department.

J. C. LAMB, sales manager, left Baton Rouge on June 16, to spend his vacation in Tampa.



A. B. CRUDGE, prepay ledger clerk, has returned from his vacation, spent in Houston and Corpus Christi.

JOHN GAMANS, paymaster, left during the month to spend his vacation in Boston.

BEAUMONT, TEX., JUNE 28

Local industries report fair business, with a slight tendency for improvement. Shipping, however, has shown some slacking off, as there is said to be but relatively little new business outside of that handled through the refineries with their own shipping lines. There is considerable construction going ahead at the Gulf Refinery and the Texas Refinery has added considerable equipment in the last year, both of which indicate that they are anticipating increased demand.

The actual change in wholesale and retail business during the month has not been great as compared to the previous month, but conditions as a whole are felt to be moving ahead conservatively. The lumber market throughout this district is showing a slow improvement, and according to Dunn's report, is facing a steady improvement. In connection with rice, which is the main agricultural product of the county, this year shows an increased acreage, as compared to last year, of about 6,000 acres.

The company's present condition we feel to be very good, and the outlook is optimistic. We have been showing a net increase of well over 130 customers a month, which will be reflected in future earnings, and are also showing an improvement in our power sales. Railway earnings have steadily shown a slight improvement each month since January.

There is still a very noticeable activity in the construction of new homes, which shows no inclination to decrease substantially from the pace it has been going for the last ten or twelve months. In spite of the increase in new homes, rents have not decreased to any extent.

Employment conditions for the most part are good. While there is some unemployment, it is not serious from a civic standpoint, and most of the men not employed seem able to locate jobs within a reasonable time.

MR. A. F. TOWNSEND, manager, left on the 7th to attend the Texas managers' meeting held in Fort Worth on June 7 and 8, returning on the 10th.

MR. F. C. TAYLOR, chief engineer, left June 3 for Hot Springs, Arkansas, for a course of treatment at that resort.

MR. B. E. VANVLIET and MR. W. J. FRANCIS left Beaumont on June 15 after making the annual audit of the company's records.

MR. P. E. MCCRESNEY, superintendent of sales, represented the company on the Chamber of Commerce trade trip through East Texas and Louisiana.

MR. A. F. TOWNSEND, manager, and MR. W. A. ROBERTSON, railway superintendent, spent the 19th and 20th in Houston on business.

MR. GEORGE B. MORGAN, of the Beaumont commercial department, left for Austin on June 26 to take the foreman's training course, which is being handled at the State University by the Federal Vocational Board. Representatives from various of our Texas companies are also attending.

MR. C. W. INGRAHAM, foreman, Beaumont meter department, and MR. G. A. JERNIGAN, line foreman, and JAKE HAGLER, meterman of the Port Arthur division, took a short course for electric metermen at A. & M. College, June 12 to 16, inclusive.

BELLINGHAM, WASH., JUNE 23

Continuous operation of the lumber mills encourages optimism among the merchants, who report an increased business over the previous year.

The normal school summer enrolment is the largest for many years, there being 1,100 students enrolled at the present time.

The Eagle's State Convention held in the city on the 19th, 20th and 21st, was very largely attended. This was also true of the State Fuel Merchants Association Fourth Annual Convention.

The Carnation Milk Products Company of Ferndale, has added a powdered milk plant with a capacity of 50,000 pounds of whole milk in a ten hour day.

The lumber mills are all in operation, the waterfront and Larson mills employing two shifts. The eastern market has improved considerably and there are sufficient orders ahead to keep the mills operating until August 1. The Clear Lake Lumber Company is also doing a large business and is handicapped only by their inability to obtain logs, there being a scarcity of men in the camps.

The Olympic Portland Cement Company is working to capacity and employing 150 men. Superior Portland Cement Company has also large future orders ahead and has recently increased the capacity of their plant by an expenditure of \$300,000 and is now capable of producing 5,000 barrels per day.

Pacific American Fisheries will operate six canneries in the north this year, the crews and supplies for these canneries being carried in three steamships of their fleet which are making continuous trips between Bellingham and Alaska.

Butter production of the Whatcom County Dairymen's Association, at Lynden, broke all records for the month of May, their output being 302,714 pounds.

Street railway earnings are improving and will show an increase of 8 or 9 per cent over the previous year. Interurban earnings are showing a very substantial improvement, the through service between Bellingham and Seattle by way of the bus line becoming very popular, and the proposed hourly service beginning the first of July will have a tendency to increase these earnings. Freight earnings should continue to improve. A recent cut in rates for L. C. L. merchandise will turn over a large share of the business that the motor trucks are now getting, and the outlook is also good for increased shipments of lumber.

Lighting earnings will show increases in both companies and power earnings will also reflect the general prosperity.

Three divisions of the U. S. Navy will visit Bellingham in July and August, each division remaining here nine days.

Building permits are increasing and there is a scarcity of skilled labor. Several business blocks are now in construction and many small homes have been built.

The strike of the union miners still continues at the Bellingham Coal Mines but it is having no effect upon their production. They are employing 160 men and their output per man is considerably in excess of the amount prior to the strike. A similar condition exists in Anacortes where the Longshoremen are on strike and there has been some violence. The mill operators, however, have declared an open shop and conditions are showing considerable improvement.

Wages of mill operators both in Bellingham as well as in Skagit County were increased 40 cents per day on June 1, making the basic rate \$3.40 for eight hours.

H. B. SEWALL, manager, spent May 31 in the general office at Seattle.

W. H. SOMERS, traffic manager of the Seattle office, was in Bellingham, June 1.

MANAGER and MRS. H. B. SEWALL, spent the week beginning June 4, at Victoria, B. C., attending the Pacific Northwest Golf Association.

W. RINGROSE, former chief clerk, now with the Tacoma Division, was in Bellingham, June 8. MR. RINGROSE was chief clerk at Seattle several months after he left Bellingham.

O. W. BENNETT, chief accountant, from COMPTROLLER BROWNELL's office at Seattle, was in Bellingham, June 7 and 8.

On the afternoon of June 8, a baseball game was played by the employees of the Bellingham Division, the married men vs. the single. The game, resulting in a victory for the single men, was full of thrills and was greatly enjoyed by the fans.

R. U. MUFFLEY, superintendent of light and power, and E. L. NOYES, purchasing agent, attended the Standardization of Construction Material Conference on the 14th and 15th. All of the Puget Sound companies were represented.

June 15th, the Bellingham Division was defeated by the Northern Division of the Pacific Northwest Traction Company in a one-sided baseball game. After the game, a picnic dinner was held at Whatcom Falls Park and enjoyed by approximately 300 employees and their families. After the dinner there was dancing and a radio concert until time for the out-of-town people to leave. The Skagit County employees were the guests on this occasion.

H. P. GEISLER, JR., superintendent of gas manufacture, gave a very interesting talk before the American Association of Engineers on "Gas, Its Manufacture and Uses." He also spoke before the State Fuel Merchants' Convention on "The Coal Business From a Consumer's Standpoint."

R. W. LINDLEY, assistant sales manager, went to Seattle on June 16 to confer with H. J. GILLIS, sales manager, about a new advertising program.

C. H. GEORGE, assistant superintendent of light and power, is still in the East on his vacation. MR. GEORGE is spending most of his time visiting relatives in Maine.

On June 17, E. P. LEE, superintendent of the bus division of the Pacific Northwest Traction Company, W. H. SOMERS, traffic manager, and H. W. GRANT, superintendent of the railway department of the Everett Division, were in Bellingham to confer with H. B. SEWALL, manager, and JOHN HICKOK, railway superintendent, in regard to hourly service on the interurban.

H. B. SEWALL, manager, was in Vancouver, B. C., on the 20th, closing up the final details of the new power contract with the Western Power Company of Canada.

F. W. BROWNELL, comptroller, of Seattle, spent the 23rd in Bellingham.

H. B. SEWALL, manager, went to Seattle on June 23 to confer with W. H. McGRATH, vice-president, in regard to some deferred street improvements which are being brought up by the city at the present time.

#### **BROCKTON, MASS., June 21**

Business in local industries remains quiet, although some improvement is shown and a decided improvement is anticipated in the fall. Factories making high grade shoes are enjoying very good trade.

The local wholesale and retail trade is satisfactory, considering general business conditions.

Conditions in the shoe industry are naturally reflected in the company's business, and while our peak load is still holding up, our kilowatt output is falling off owing to the seasonable reduction in the demand for lighting. New business, however, continues to come in at a very satisfactory rate, 270 applications for service having been received during the first 20 days of this month. With the start of the new fall run in the shoe factories, which usually comes in August, we expect an increased demand

for power, which, together with the additional business taken on since the first of the year, should give us very satisfactory business for the last half of the year.

Building activities show great improvement—permits for the first five months of the year aggregating almost \$600,000. The improvement contemplated through the extension of Centre Street and City Hall Avenue should materially stimulate building activities in the business section. This project reaches its final passage at the next meeting of the Common Council, and work is to be started immediately after final action is taken.

The labor situation is as good as could be expected. Wages in practically all crafts have been adjusted for the coming year, and no controversies on wages or conditions are in sight.

MR. and MRS. PAUL R. FLEMING announce the birth of a son, Robert Dexter, on June 12.

MISS EDITH G. MAYBURY, pay roll clerk, was married on June 21, to Howard L. Drake, and immediately after the ceremony left for Detroit, Michigan, where she will make her home, Mr. Drake being employed by the Sinclair Refining Company in that City. As a parting gift from her office associates, Miss Maybury received an electric urn set and grill.

On the evening of June 6, the office force enjoyed the hospitality of the Blackstone Valley Gas and Electric Company at their monthly social held at Pawtucket. The trip was made by auto furnished by the company.

A talk by MR. H. T. EDGAR, of the Boston office, on topics of interest to employees of the companies was most entertaining and instructive.

After a short business meeting, a minstrel show was given, in which the Brockton company was not overlooked as targets for jokes. Dancing and refreshments followed and the Pawtucket company were voted royal entertainers.

MISS DORIS BEAL, of the accounting department, entertained the office force at her summer home on Big Sandy Pond on June 17. The party was given in honor of the approaching wedding of Miss EDITH G. MAYBURY.

A most enjoyable afternoon was spent in games, bathing and boating—a ball game in which the young ladies assisted being not the least entertaining part of the program.

A luncheon was served at six o'clock by the hostess, Miss BEAL. The decorations were in yellow and white with place cards of a miniature bride and groom at each cover. Following the luncheon, CARL HATCHFIELD, of the sales department, entertained with solos, and later dancing was enjoyed at Mayflower Grove.

Mr. Howard Foss, of Savannah, Ga., was a recent visitor at the office and plant.

#### COLUMBUS, GA., JUNE 24

The Golden's Foundry and Machine Co. have gone back on a six-day schedule. A five-day schedule has been in operation for the past year and a half. The Columbus Iron Works report a small but steady number of orders. This is due to the increasing activities of the saw mills in cutting over second growth timber for roofing purposes. Lummus Cotton Gin Co. report several new unfilled orders and good prospects for future business. Swift Spinning Mills are preparing to build a \$25,000 addition to their mill, providing more picker room space. The Merchants and Mechanics Bank report a very prosperous season, and recently declared a 5 per cent dividend, which will be paid July 1. This is the regular semi-annual dividend, and it is somewhat larger than is being paid at a number of banks in Georgia.

Local retail business is rather quiet. Silver's, a five and ten cent store, opened its

doors during the month. This store is one of a chain which operates in various towns of Georgia.

A large new drug store, a branch of the Co-operative Drug Stores System, also began business this month.

The King Grocery Co., which reports a capitalization of \$12,500, will begin business July 1. This is a wholesale grocery concern.

With the completion of the Fourteenth Street Bridge, through traffic into Phenix City and Girard, Ala., was started. The improved service, in addition to the better class of cars now operating on this line, seems to be having a good effect.

Beginning Monday, the 26th, a campaign to sell stock of the Columbus Electric and Power Co. will be started. Mr. H. J. PETTINGILL, of the Boston office, has charge of this, and the members of the local organization will work under his direction.

On the whole, the outlook for the remainder of the year appears very favorable.

The Flournoy Realty Co. report considerable success in the sale of their Peacock Woods development. To date the amount of sales is very close to \$70,000.

An article in the *Columbus Ledger* the past week estimated that the building now going on in Columbus will approximate \$500,000.

The Burrus Motor Co. is erecting a \$35,000 building on First Avenue, between Twelfth and Thirteenth Streets, which they will occupy as an automobile salesroom and service building.

A large store building, costing \$50,000, is to be constructed on Twelfth Street.

The Banks building expects to spend \$35,000 in improvements after which it will be turned over to the doctors of Columbus for offices.

A \$10,000 brick warehouse will be built at the corner of Dillingham and Front Streets.

Homes are being built in all sections of Columbus. This is a direct result of present lower building costs and the high rents of last fall, caused by the demand of the officers at Fort Benning for suitable living quarters.

The labor situation here is somewhat improved over the past few months. Continued hot weather for the past two weeks has enabled the farmers to continue steady work on their crops. There is also considerable road work going on, both in the outlying districts of Columbus and on the county roads. This is giving employment to large numbers of unskilled laborers.

The weather here for the past three weeks has been very hot and sultry. This is ideal cotton weather, and the crop is reported as being in very fair condition. The heat wave has given the boll weevil a decided set back, in addition to giving the farmer an opportunity to rid the fields of grass and weeds.

On June 6, the employees of the Columbus Electric & Power Company were given a barbecue at Wildwood Park. A ball game during the afternoon and dancing at night were special features of the entertainment.

The first half of the series in the Industrial Baseball League was won by the Meritas Mills. The company team came in second place. We intend to win the last half of the series, and made a good start by winning the first game, played with Bradley Manufacturing Company, to the tune of 18 to 2.

Mr. J. JACOBS, our superintendent of power, spent a few days vacation at Savannah and Tybee this month.

Mr. R. M. HARDING, manager, has drawn up plans for a new home which he intends building on Hilton Avenue. Just at present he is very busy trying to keep construction costs within the bogey.

MR. W. E. SHERRER, superintendent of North Highlands Station No. 1, underwent an operation for appendicitis during the month, and from last reports, is doing nicely.

PETE SMITH, assistant storekeeper, spent a few days this month at Savannah and Tybee.

MR. CARL FRAZER, chief clerk, has been transferred to the treasurer's office in Boston. Before he left he was presented with a wardrobe trunk by his friends in the company.

MR. F. U. GARRARD, company attorney, entertained the Georgia Bar Association at a barbecue at his home "Wildwood" on June 24.

MR. WAYNE PATTERSON, commercial manager, with his wife is chaperoning the Girl Scouts' Camp at Cloudland, Ga., for a couple of weeks.

MR. H. J. PETTINGILL, of the Boston office, is very busy here in Columbus getting all the plans lined up in connection with the sale of stock of Columbus Electric & Power Company.

MRS. B. T. LONGINO has returned from a short vacation spent in Jacksonville.

#### EL PASO, TEX., JUNE 26

With the exception of the Southwestern Portland Cement Company plant, which is running full force, business generally with the local industries is quiet.

Wholesale and retail business men report that their business is rather quiet, that few orders are being received from outside territory and that collections are poor.

The following firms have opened branches in El Paso: International Harvester Co., Goodrich Rubber Co., The Safe Cabinet Co., of Marietta, Ohio.

The condition of the company's business and outlook for the future is fair.

Few real estate deals are reported, although some building is in progress, consisting chiefly of apartment houses and bungalows. Four of the seven public schools which are to be built are in course of construction.

Labor conditions with regard to common labor are improved, due to the railroads and mining interests shipping men out of town through their local agencies.

Skilled labor is fairly well employed and unemployment is not exceptional in view of local business conditions.

MR. LUKE C. BRADLEY, district manager, was a visitor here this month.

Miss RUTH REEVES, of the claim department, was married on June 12 to Mr. T. W. Sullivan, of El Paso. Mr. and Mrs. Sullivan were presented with a beautiful electric floor lamp by the employees of the company.

MR. ALVES DIXON, superintendent of railways, attended the International Convention of Rotary Clubs held in Los Angeles, California, this month.

MR. R. A. GILL, assistant to the railway superintendent, accompanied by his family, is spending his vacation on the Ruidoso, a summer resort in the Sacramento Mountains, New Mexico.

MR. H. H. JOHNSON, head meter tester, has returned from a five weeks' course in meter testing and repairing at the plants of the Westinghouse Electric & Manufacturing Company at Newark, N. J., and East Pittsburgh, Pa.

Miss LYDIA CARSON, of the accounting department, was married on June 17 to Mr. Frank Patterson of El Paso. Mr. and Mrs. Patterson were presented with a beautiful chest of silver, a gift from the employees of the company.

Miss K. RACHAL, of the accounting department, is visiting her home in Alexandria, La.

MISS KATHLEEN O'CONNELL, of the accounting department, has returned from Los Angeles, California, where she spent a very enjoyable vacation.

MR. R. O. HIMEL, our assistant treasurer, is the proud father of a daughter born June 19, and named Mary Alice. This is the sixth child, the other five being boys.

#### EVERETT, WASH., JUNE 26

The latest report of the West Coast Lumbermen's Association shows for the reporting mills production 8 per cent above normal; new business offsets production; shipments were 15 per cent above new business.

Mills have continued during the entire month of June working at full capacity, and the same number reported last month are working night shifts. There has been a slight improvement in price. The shingle mills are now running and the market has improved sufficiently so that a number of small and independent mills are placing shingles on the market.

Retail merchants report business during the month of June as having improved over the month of May. Local wholesale hardware men are doing practically the same amount of business at the present time as during the peak of the war period. The lumber industry and the logging camps are so extending their facilities that orders for pipe and steel have been abnormal. The wholesale business is being conducted on a reasonable margin of profit and the owners predict a very satisfactory year.

The month of June has been devoted to setting poles and stringing wires on extensions east of Everett. Excellent progress has been made. It is hoped that service will be available to some of the consumers within a month. The line will not be completed, however, until November. Contracts have been signed for an extension from Everett to Mukilteo to furnish 750 horse-power to the Crown Lumber Company.

Construction has been started on a new public market, which is the only large business building in the process of construction at the present time. However, the building of new residences is increasing daily.

During the early part of the month a slight shortage of labor was experienced by a number of the local mills, due to the opening of night shifts, and it was necessary to do more advertising and make a greater effort for men to man the mills than has been done for a period of nearly two years. This condition, together with the increase in minimum wage which was granted, effective June 1, should indicate prosperity for Everett during the coming three or four months at least.

#### FORT MADISON, IA., JUNE 29

With the exception of the American Fork & Hoe Company, all local industries are operating to full capacity.

The Junkin Paper Company report that their business is approximately three times as great as at this period of last year. They report that the paper market is better than it has been for some time.

The Hinde Dauch Paper Company are operating their new mill to full capacity, and report very good conditions in their industry.

The W. A. Sheaffer Pen Company are operating to full capacity, and have filled orders for the first six months of this year in excess of the corresponding period last year.

The Perfection Tire & Rubber Company are operating approximately 20 hours per day.

The Samuel Mahon Company, wholesale grocers, report that business is better

this year than last. Retail merchants report better business during the month of May, but complain of a falling off in business during the month of June.

During the month of June our gain in customers will be approximately 30, with a total net gain of 188 for the first six months of this year. We show a very substantial gain in all revenue accounts over last year, and fully expect this increase to be continued for the balance of the year.

Real estate transfers have been unusually active in the past 30 days, and the high price level seems to continue in spite of very active building operations.

The First M. E. Church have recently awarded a contract for the construction of a \$30,000 church and parsonage, and it is reported that building operations will start at once.

St. Joseph's Church have also announced that they will erect a new school building, which will be a modern school building in every respect.

The Board of Education are completing plans and specifications for the new \$300,000 high school building, and it is expected that contracts will be awarded within the next 30 days.

The S. & J. C. Atlee Lumber Company reports greater activity in the building line than for the past year. It is estimated that there are approximately 150 homes in the process of erection, and for which plans have already been let.

The new concrete road through the new Sunnyside addition has recently been opened and presented to the city and accepted by the city council. The Sunnyside addition is the latest residential sub-division, and was first opened up last fall.

On account of the large amount of building, together with construction work of all kinds there is no idle labor in Fort Madison. The wage scale has been reduced in practically all local industries, but the reduction has not had any marked effect.

P. I. ROBINSON attended a hearing before the Illinois Commerce Commission on June 7, regarding rules for rural service. This hearing occupied two days, and was in the nature of a conference between members of the Commission, the Illinois State Electric Association and representatives of Farm Bureau and rural customers. A great deal of evidence was presented and it is hoped that some satisfactory solution of the rural service problem will be the outcome of this hearing.

The Iowa Section of the National Electric Light Association held their annual convention at Lake Okoboji on June 20 to 23, inclusive, and P. I. ROBINSON, of this company, attended the convention.

On Tuesday, June 6, the wedding of Mr. JOHN W. KELLY, assistant treasurer of this company, and Miss Virginia Klein, of Burlington, took place. Mr. and Mrs. KELLY left immediately for their honeymoon trip, east. They will take up their residence in Keokuk on their return. Mr. KELLEY has been transferred to Keokuk as assistant treasurer of the Keokuk Electric Company.

MR. WILBUR E. DAVIS, who has been chief clerk of the Keokuk Electric Company, succeeds Mr. JOHN W. KELLY as assistant treasurer of the Fort Madison Electric Company and the Dallas City Light Company.

On Tuesday, June 6, Mr. M. B. Lawlor, father of Miss RUTH LAWLOR, clerk in this office, passed away, following an illness of several months.

#### **FORT WORTH, TEX., JUNE 24**

The conditions of local industries of Fort Worth and vicinity continues to show a gratifying improvement, and, taken as a whole, we believe that the local industries show a 25 per cent improvement over any period during the past two weeks.

The railroads are gradually putting on larger forces, and have improvements of



considerable importance which they contemplate starting in the near future. Some of these improvements consist of the T. & P. Railroad Company moving their down town yards to a tract of land in the western portion of the city, which they acquired some time ago. The Southern Pacific Railroad Company, we understand, has completed arrangements whereby they will obtain yard privileges in connection with the present yards of the Frisco Railroad Company. This will necessitate additional shops for the Southern Pacific Company, and possibly for the Frisco Line.

There are several concerns of more or less importance who are at this time negotiating with the Chamber of Commerce for locations in Fort Worth. One of these is a large tool and well drilling concern, which, we understand, will be capitalized for something over \$500,000.

The packing houses at this time are only operating at about 50 per cent of their capacity, and we are unable to find out any definite information as to when they expect to increase their output.

The wholesale concerns in the city report that their business continues to show improvement, and that all merchants are inclined to buy a little more heavily than has been the custom for the past several months.

The retail merchants are more optimistic at this time than they have been for several weeks past. Some of them, however, are showing signs of nervousness in that they are already putting on sales in order to lighten their stocks on the summer and spring clothing, etc.

Crops in the Fort Worth trade territory indicate that a fairly good harvest will be made, and in East Texas, particularly, the cotton crop is above the average. With the price at a good figure and no signs of weakening, we believe that we may expect an improvement in our business this fall.

The real estate agents report fairly good activities in their line for this time of the year. Building activity, more especially in the residential class, continues brisk.

The Managers' Club of the Texas District held a meeting in Fort Worth on June 8 and 9. MR. LUKE C. BRADLEY, district manager, and all managers in the district, attended. All the visitors, as well as some of the local officials, spent one night at the Traction Club at Lake Worth.

MR. C. H. BOWEN, superintendent of transportation, and MR. R. C. ALLEN, assistant superintendent, attended a meeting of transportation men in Houston on June 19 and 20.

Employees of the company enjoyed a very pleasant trip and swimming party in Dallas at the new natatorium in Oak Cliff, on the evening of Thursday, June 15. A box lunch was served on the special car on the trip over.

MR. H. V. SCANLAN, chief clerk, Galveston Electric Company, was a visitor in Fort Worth during the month.

MR. F. B. SCURLOCK, superintendent of transportation, El Paso Electric Railway Company, stopped over in Fort Worth on his way to the meeting in Houston.

MR. S. F. WINE, commercial agent, attended the Commercial Agents' Convention held in Keokuk, Ia., May 22 to 25. MR. WINE gave a very interesting talk at the weekly meeting of department heads on most interesting points of the Keokuk plants and the convention.

MESSRS. E. E. STEWART, chief clerk to master mechanic, R. C. ALLEN, assistant superintendent of transportation, and H. M. ROBINSON, mechanical engineer, leave June 26, to attend a two weeks' course at the University of Texas on electric street railway foremanship. This course is being given free of cost under the Federal and State Board of Vocational Education.

MR. CECIL CROWLEY, head meterman for the lighting department of this company, has just returned from A. & M. College, where he took a special five days' course of instruction on meters given by that institution.

**GALVESTON, TEX., JUNE 23**

Business along all lines of local industries is approximately 80 per cent normal, according to advice received from the Galveston Commercial Association.

The first cargo of sugar to be handled in Galveston proper this season, consisting of 24,200 sacks, was discharged on June 22.

Wholesale and retail business is below normal. This condition is attributed to the heavy floods throughout the state during the past month, which resulted in destroying crops, thus making it difficult for the farmers to borrow money, or to get the wholesale dealers to assist them, and carry them over until they could realize something from their products.

Through the efforts of the Galveston Beach Association and Galveston Commercial Association, the following features of entertainment and conventions, took place in Galveston during June; the third annual convention of The Texas Winchester Club, and the annual convention of the State Lutheran Sunday School Teachers' Association. The annual Oleander Fete was held on June 3, 4 and 5.

Twenty-two airplanes from Ellington and Kelly fields took part in the aviation maneuvers on Sunday, June 18.

According to opinion of contractors and others engaged in the building trades, conditions in Galveston at present are more prosperous than at any previous time in the history of the city.

Heretofore, the greater part of building activity was centered in home construction, but during the past few weeks, the business district has shown marked improvement, and several structures are in process of erection; some are being remodeled, and others are under consideration.

Labor and employment conditions in Galveston are good; there is plenty of miscellaneous labor to be done, and everyone can get employment if he is so inclined.

On July 1, MR. WM. L. DROUILHET, billing clerk, celebrated his twenty-fifth anniversary in the street railway and light and power business in Galveston, and during that time he has a record of working continuously on a floor space of 20 x 50 feet.

MR. DROUILHET entered the service of the Galveston City Railway Company in July, 1897, as general clerk, under COLONEL WM. SINCLAIRE, president, and MR. A. DROUILHET (his father), secretary-treasurer. These three men composed the personnel of the office at that time. He held the position of general clerk until May, 1905, when Stone & Webster purchased the property of the Galveston City Railway Company, at which time he was promoted to chief clerk; he served in this capacity for twelve years, or until February, 1917, when he was transferred to the lighting department as billing clerk—his present position. During the twenty-five years of service, MR. DROUILHET has worked under seven managers and seven assistant treasurers.

MR. J. STEELE, a graduate of the 1922 electrical engineering class at A. & M. College, entered the service of this company on June 22.

MESSRS. THOMAS E. KESSLER, shop foreman, and MR. J. STEELE, electrical engineer, will attend the Federal Vocational Education Conference to be held at the University of Texas, Austin, Tex., June 26 to July 8, inclusive.

MESSRS. C. H. BOWEN, superintendent of transportation, and ROBT. C. ALLEN,

general inspector, of the Northern Texas Traction Company, Fort Worth, and FRANK B. SCURLOCK, superintendent of transportation of the El Paso Electric Company, were visitors in Galveston during the month.

MR. R. G. CARROLL, manager, attended the Managers' Club Meeting at Fort Worth, Tex., June 8-9.

MR. MACK ELLIS entered the service of the company on June 1, as acting assistant chief engineer, to succeed Mr. JAMES O'ROURKE, who resigned as of June 1.

MR. H. T. EAVES, meter foreman, attended the one week's course in meter work at the A. & M. College, College Station, June 12-17.

MESSRS. VAN VLIET and FRANCIS, of the Boston office, arrived in Galveston on Saturday, June 17, to audit the books of this company.

MR. H. V. SCANLON, chief clerk, has recently returned from a pleasant visit to Fort Worth.

MR. and MRS. W. L. DROUILHET have announced the birth of a daughter, Mary Ellen, on June 2.

MR. J. W. BENTON, JR., general clerk of the Houston Electric Company, Houston, has been in Galveston for the past few weeks helping the local accounting department work up statistical data in connection with our street railway fare case.

The company's annual picnic to its employees and their families was held at Dickinson on Wednesday, June 14.

Dancing, eating barbecued meats and playing baseball proved to be the stellar attractions for the day. A French chef was imported from Paris, "Texas," to preside over the barbecue dug-out, and, in justice to his ability, it might be said that the cupboard was bare when the picnic ended.

MR. MACK ELLIS, our power station engineer, proved to all present that Vernon Castle was a back number so far as the Terpsichorean art is concerned. The animated ball game between the office force, termed "never sweats" and the shop boys, better known as the "dirty socks" was umpired by the "boss," MR. CARROLL. There are great doubts in the minds of the contesting teams as to whether or not he will be invited to umpire again. It is needless to say that he welcomed the protection of the park police, in being escorted to the eats after the game.

The honor guests for the occasion were MR. and MRS. NEWLY WED HARVIN, of the Betterment Division of the Boston office, who arrived in Galveston the day of the festivity.

#### HALIFAX, N. S., JUNE 24

Industrial business conditions are fair. Our three largest manufacturers are running full time while conditions are improving somewhat at the shipyards in the way of repair work. Shipping and exporting trade is quiet at present owing to steamships being diverted to Montreal for the summer months.

Wholesale business is somewhat restricted at present owing to fluctuating markets. Payments are fair. Retail business fair with less volume but keen competition.

In the light and power department the kilowatt hour output at the power station is slightly above the corresponding period of last year and the same is true of the send-out in the gas department.

Real estate is inactive, very little commercial building going on at present. Dalhousie College is putting up new buildings involving an expenditure of about \$400,000. A fair amount of residential building is going on. A small amount of street paving was started during the month by the city and this company; the company's program being to do about one mile of paving during the season.

The unemployment situation is still acute, the unemployment office reporting the number of workers registered on their books at present to be about the same as during the month of January.

During the month, the hydro-electric power operated by the Provincial Government at St. Margaret's Bay was connected with our station and our steam generating plant closed down. We are now under contract with the Power Commission for the supply of electrical energy for 30 years.

MESSRS. P. R. WILLIAMS and W. SHERBURNE, auditors from Boston, have completed their work with this company and we understand have proceeded to Sydney.

We have now with us, MESSRS. NASH, HAYES and TUCKER, from the Boston office, assisting in the valuation hearing at present being conducted by the Nova Scotia Board of Commissioners of Public Utilities.

#### HAVERHILL, MASS., JUNE 26

The shoe business, which represents practically the entire industry of this City, is about normal for this time of the year.

During May, our send-out improved somewhat, but this condition did not persist.

Labor conditions have not been quiet in Haverhill for many years, but there is no noticeable change at this present moment. Employment is normal for this season of the year.

MR. J. P. INGLE, attended the meeting of the Employees' Club, at Pawtucket on June 6, and made a short talk to the employees of the Woonsocket Gas & Electric Company at Woonsocket on June 7.

MR. J. P. INGLE has been transferred to the Jacksonville Traction Company, Jacksonville, Florida, as manager. MR. TOM P. WALKER of this company, will succeed MR. INGLE.

MR. M. L. SPERRY, district manager, MR. H. A. LEMMON, of the Personnel Department, and MR. R. F. WHITNEY, vice-president and general manager of the Fall River Electric Company, visited Haverhill during the month.

MR. J. C. Day, manager, and MR. R. S. CARTER, superintendent of the Malden & Melrose Gas Company, called on us recently.

MR. JOSEPH T. SULLIVAN, chief chemist at the plant, was married in Fall River on June 5, and the employees of the company presented him and his wife with a dinner set and silver service.

The Gas Club held its regular June meeting at Canobie Lake Park on Wednesday, June 21. The affair was in the nature of a basket picnic and a large program of sports was planned. The weather, however, prevented any out-door events and it was necessary to resort to nail-driving contests, bowling and tug-of-wars. Despite the most inclement weather, the day proved very enjoyable to about one hundred members of the company and their families. MR. H. T. EDGAR and MR. RALPH WILLIAMS, from the Boston office, were both guests of the club.

MR. EDWARD H. BAUER, superintendent of manufacture of the Providence Gas Company, visited our plant recently.

MR. GEORGE H. PRIEST, of the Brockton Gas Light Company and MR. ROBERT TIRRELL, the new manager of the Amesbury and Salisbury Gas Company, called on us on Wednesday, June 21.

MR. H. VITTINGHOFF, of the Boston office, spent the day in Haverhill recently.

#### HOUGHTON, MICH., JUNE 24

There has been little change in the copper mining industry during the past month.

Wholesale and retail business is far from satisfactory, and merchants report that their sales show no increase over corresponding period a year ago.

The business of the Lighting Company is holding up very well, the receipts for last month being in excess of corresponding month a year ago.

There is practically no new building going on. Local contractors are fairly busy in making minor repairs. The only building of any size to be erected in the near future is the Houghton High School, which was destroyed by fire last winter. The contract for this building will probably be let some time this summer.

The mining companies are having difficulty in securing underground men at the wages now in effect. In the past two months there has been a large exodus of men from this district, who have left to seek employment in the automobile factories in the lower part of the state.

MR. GEORGE MCKENZIE, an employee of the Traction Company for 22 years, died at his home in Hancock, on May 29.

The Corn Products Company, of Chicago, conducted a demonstration of their products at the Houghton office during the week of May 29-31 and June 1 and 2.

A son was born to Mr. and Mrs. P. W. WILDER, on May 30. Mr. WILDER is superintendent of distribution in the southern division of the Lighting Company.

MISS JOSEPHINE R. BRUNNER, stenographer in the accounting department, is spending her vacation on a farm at Butternut, Wisconsin.

MISS ETHEL KLASNER, telephone operator, spent her vacation at Green Bay, Clintonville and Shacono, Wisconsin, and at Marquette, Michigan.

MR. DAVID DALY, district manager, arrived in Houghton on June 15, and spent a few days going over the Houghton properties.

Upwards of 350 firemen from New York and Pennsylvania, visited Houghton on June 10, making the trip on the liner *Octorara*. The party came here as the guest of two Buffalo newspapers.

A total of 5,004 tons of copper were shipped East by water during the month of May, the first month of navigation for the year 1922, according to the monthly statement issued from the office of Superintendent George Banks, for Keweenaw waterway, which compares with 2,655 tons in May, 1921. Twenty-six steam barges passed up, and eight passed down during the month.

Daylight saving throughout Houghton County went into effect on June 17.

During the month, the Houghton County Traction Company conducted a Safety First campaign in all the schools in the district. In addition to brief talks by Mr. HARRY E. MATTHEWS and Mr. I. R. CARLSON, a special "School Safety Number" of the *Traction News* was distributed to each of the students.

A regular meeting of the L. & T. Club was held at Electric Park, Thursday evening, June 22. Supper was served at 6.30 P. M. to 74 members.

A seven-inning baseball game was played between the Lighting and Traction teams, the final score being 11 to 4, in favor of the Traction boys.

A horseshoe tossing contest was held directly after the baseball game and prizes were awarded to the teams making the three highest points. The winning teams were PETER McNAMARA and EDWARD AHO, first; BERT BONENFANT and RUSSELL SAAM, second; and DAVID DENNIS and HARRY MATTHEWS, third.

#### HOUSTON, TEX., JUNE 23

Tonnage handled through the Port of Houston during the month of May amounted to 179,152 tons, an increase of 273 per cent over May, 1921.

With the completion of our new track work, which will enable us to give proper service, we are hopeful of showing an increase over the 1921 receipts.

One of the largest real estate deals recently consummated was when Mr. Henry S. Fox, Jr., purchased three down town lots on Main Street, between McKinney and Walker, for a consideration of \$171,450. Plans and specifications are now being prepared for a five-story addition to the 16-story Carter Building. Work is expected to start as soon as the contract can be let and material assembled. Contract has been awarded for the erection of a new fire and police station, to be built at Caroline and Preston, at a cost of \$222,426.

Building, which has broken all precedent so far this year, is continuing in this month and permits will probably be issued for more than \$1,000,000 worth of building during the month of June—total for the year \$6,576,000.

The labor situation is very much improved as compared with several months ago. At the present time the employment bureaus state it is comparatively easy to place all persons who are actually looking for work.

In the recent strike vote it is stated that 95 per cent of the local union of International Machinists, and 95 per cent of the Boilermakers' Union are in favor of the proposed strike. It is estimated by railroad officials that approximately 7,500 union men located here will be affected by the recent wage reduction authorized by the U. S. Railroad Board.

MESSRS. BRADLEY and WOOD attended the Managers' Meeting at Fort Worth, June 8 and 9. Mr. TOWNSEND and Mr. CARROLL paid a visit to the office on their way home from the Managers' Meeting.

MISS FLORENCE WINK, who has been a stenographer in the manager's office for the past five years, resigned on June 15, to take up work with the Y. W. C. A.

Mr. WOOD and family, accompanied by Mr. MORSE, left for Colorado on June 17, making the trip in Mr. Wood's car.

Mr. C. J. HARVIN and Mr. LUTHER, of the Betterment Division, are at present in the city.

MESSRS. HART and HOWARD, of the Galveston Electric Company, visited Houston on business during the month.

A meeting of the superintendents of the Texas district was held in Houston, June 19 and 20; the following out-of-town members of the organization were present: MESSRS. TOWNSEND, Beaumont; ROBERTSON, Beaumont; McLINN, Galveston; BOWEN, Fort Worth; SCURLOCK, El Paso.

Mr. BRADLEY visited the El Paso property during the month.

Mr. R. C. ALLEN, Fort Worth, was a visitor in the city.

#### KEOKUK, IA., JUNE 27

Practically every industry in this vicinity has shown a marked improvement over the month of May. The Standard Four Tire Company and Keokuk Electro Metal Company are working both a day and night shift to take care of orders for future delivery. The United Lead Company, although operating only their lead department, are enjoying a better business than at any time during the war. The J. C. Hubinger Brothers Company, operating only their starch department and employing about two-thirds their regular force, are doing a very good business.

The industries in Hamilton, Illinois, namely the Marx-Hass Clothing Company, Hamilton Clay Company, Dadant & Sons Bee Supplies, are all ahead of the previous month and corresponding period last year.

The industries in this vicinity with the exception of the Gas Tank Recharging

Company and the Carbide Department of the United Lead Company have not been materially affected by the coal situation.

The wholesale business is much better than the previous month and also a year ago. This is particularly true of the hardware and grocery lines. The local freight offices of the C. B. & Q. R. R. Co., report that while the gross tonnage handled this year does not equal that of June, 1921, due, of course, to the coal shipments, yet the merchandise handled in and out of Keokuk this month has shown a very nice increase over last year, also previous month.

The retail men are feeling more encouraged than they did a month ago. All report a nice increase over May.

Our electric department will show an increase for this month. This is due to our residence lighting load.

Our gas department, as predicted in last month's letter has shown a substantial increase due to heavy canning season of early fruit.

It will be of interest to note that we have been asked to furnish an estimate of cost for approximately 100 horse-power installation at the Keokuk Barrel Company.

Several new residences are now under construction. The Baker-Dodge Theatre Company are now remodeling the Hippodrome Theatre to seat 1,500. They estimate this improvement to cost \$20,000.

We are not effected to any great extent by the present coal strike. Our industries have no trouble in securing labor. There does not seem to be a great number of people out of employment around here, although a number are only working by day jobs in the hopes that the Purity Oats Company will start again, or that the J. C. Hubinger Brothers Company and one or two other concerns will soon put on their full force.

MR. J. L. ALEXANDER, manager, acting under advice of his physician left Keokuk, May 29, to recover from a recent illness. Latest news from him state that he was obliged to undergo a minor operation at Boston.

MR. L. V. SMITH, assistant treasurer, has been transferred to Paducah, Kentucky, as assistant treasurer of the Paducah Electric Company. On June 6, the evening before his departure, the employees of this company chartered a special interurban car to Warsaw, Illinois, where they gave Mr. and Mrs. SMITH a farewell dinner.

The position of assistant treasurer will be filled by MR. J. W. KELLY, formerly of Fort Madison Electric Company, who is at present on his honeymoon in New England States.

MISS MARY BRASSIL, stenographer, left our employ on June 15, and was married to Mr. Henry Heuser, of Omaha, Nebraska, on June 28. Miss BRASSIL was tendered a party at the DuPont picnic grounds by the employees of the company.

MR. W. C. FLETCHER has taken the position of office clerk, made vacant by several promotions in this office.

MR. JAMES B. HODGE has joined the forces of the Keokuk Electric Company, to work in connection with the sales department.

MR. HARRY STARR, meter repair man has left the employ of this company. His position has been filled by MR. HARRY OGDEN.

#### *Mississippi River Power Company*

MESSRS. N. C. OWERS, H. F. NEILL and G. L. BAKER, having made the annual audit of the Power Company's books, left Keokuk, June 28 for the West.

MR. C. A. SEARS, manager, attended a meeting of the State Association of the National Electric Light Association which was held at Lake Okoboji, June 20, 21,

and 22. At this meeting MR. SEARS was elected first vice-president of the Iowa organization. MR. and MRS. C. A. SEARS accompanied by MR. and MRS. E. C. HART, made the trip to Lake Okoboji by automobile. While there MR. SEARS had the misfortune to sprain his ankle.

MR. N. T. WILCOX, sales manager, also attended this meeting.

#### KEY WEST, FLA., JUNE 29

MR. B. L. GROOMS, manager, was ill and confined to his home for two weeks during the month.

MESSRS. STANLEY KEY, P. L. MESA and OTTO KERCHHEINER are enjoying a fishing trip at Lost Harbor.

MR. R. K. WILKERSON has been transferred from the Jacksonville Traction Company to the Key West power station as assistant chief engineer to relieve MR. JOHN C. HIGGS, who has been transferred to Jacksonville as assistant chief engineer.

MR. L. N. DAVIS arrived in Key West on June 26 from Savannah, Ga., to accept a position as operating engineer in our power plant.

#### LOWELL, MASS., JUNE 24

The baseball team is having hard luck; score for the game with the Oakland Club on May 25 was L. E. L.—1, Oakland Club—2; with West Chelmsford on May 25, score was: L. E. L.—7, West Chelmsford—8.

The last meeting of the L. E. L. Girls' Sewing Club of this season was held on Monday, June 5, at the home of Miss ALICE JOHNSTON, 380 Wilder Street. Miss BLOOD assisted as hostess. These monthly meetings will be resumed in the fall.

MR. E. SHEPPARD, of the distribution department, was married to Miss Laura Chase, of Salem, Mass., on May 31, 1922.

MR. T. COLLINGE, also of the distribution department, was married to Miss Emma McPhail, of Billerica, in May.

#### MIDDLETOWN, CONN., JUNE 26

The condition of local industries as a whole is considerably improved. The Noiseless Typewriter Company is busy on several foreign contracts in addition to the increased work for domestic use. The Frisbie Motor Company is exceptionally busy and working overtime. The DuBarry Mfg. Co. is now operating with a fair-sized force. This company is a recent addition and is engaged in the manufacture of hair pins and metal novelties.

During the month of June, increased orders at the various brick yards have been such that we are now supplying them with an additional 350 horse-power. We have also several extensions under consideration, one being for the purpose of supplying power to a new quarry.

Building for the past month has been wholly confined to residential work, there being several new homes under construction. Work in connection with paving Main Street, Middletown, is progressing rapidly. This work is being done at an approximate cost of \$125,000.

Jobs Pond, Portland, was the scene of a very successful picnic, enjoyed by the employees and their families. This picnic was held June 1, and there were 65 present. It seems as if latent ability is always cropping out in our organization. This time it was "DREWY" LOHNEISS, of the engineering department, who proves that he can make "chowder" with the best of them.



MESSRS. BIRD, TRULL, KEBBE and CURRAN were visitors in Middletown, June 14. MR. F. K. SIMMONS of Woonsocket, R. I., was a visitor in Middletown, June 21.

At the weekly meeting of the department heads held June 19, MR. BEACH, president of the Middletown National Bank, gave a very instructive and interesting talk on banking.

#### NEW LONDON, CONN., JULY, 10

Local industries are showing an improvement. On June 19, one of the largest machine shops went on a full time basis with approximately a 10 per cent cut in wages. The silk mills and garment factories are working full time and have many orders booked for the future.

The condition of local wholesale and retail business is holding strong, influenced greatly by the influx of summer visitors.

The condition of the company's business is good in all departments and the outlook for the future is bright. Sales of gas and electric appliances have been very brisk and a number of newly wired houses have been connected for electricity.

There has been a slight amount of trading in real estate but only two permits have been issued for cottages so far this month. Some twenty permits, however, have been issued for small garages and incidental repairs to buildings.

Labor and employment conditions are normal. There seems to be plenty of work for those who are willing to accept the wages offered.

"Say It With Flowers," a one act comedy, was admirably presented by members of the CoPoCo Club on the evening of June 2, in the Parish House of the Second Congregational Church. The stage in the large hall was most tastefully decorated to represent the interior of a florist's shop. Large clusters of rhododendrons, iris and carnations predominated, with a background of ferns and potted plants.

Slovsky, East Side Jew proprietor, played by ARTHUR L. KEBBE, sales manager; Maude, his bookkeeper, by ETHEL G. HANKS; Henry, tough office boy, by HAROLD McGRATH; Miss Jennie Wells, timid, talkative spinster, by MARY EGAN, and James Jackson, a tight young man, engaged to Miss Wells, by HAROLD EASTMAN, were the parts admirably portrayed.

Mrs. Viggo E. Bird was responsible for the complete success of the play. The stage setting was made under her personal direction. Clara Turner Hammond directed the rehearsals.

The play was followed by two pretty dances. Irene Rennie in a costume designed by herself interpreted "The Spirit of the Midnight Wind." Her dance was followed by "A Spanish Dance" rendered by Mary Harrigan. Both girls received much applause.

Under the new city charter of New London it is required that the assessors re-value the land sites and the buildings thereon in a manner that will insure substantial equity to all owners of real estate. For this purpose The Manufacturers Appraisal Company of Philadelphia has been engaged and are now making an appraisal.

MR. H. T. EDGAR was a visitor during the month.

MR. H. G. BURR, of the Statistical Department, Boston office, spent a few days in the meter department gathering information on meters and metering. MR. BURR had planned to spend at least a week or ten days but unfortunately had to return to Boston because of the sudden death of his father.

Mrs. Charles Bolton arrived recently from Key West to join her husband, CHARLIE BOLTON, of the accounting department.

The Annual Harvard-Yale boat race was run on the Thames River, Friday, June

23. During the morning, Harvard took the honors in both the Freshmen and Junior races but lost the big Varsity race in the afternoon by over three lengths. It was a perfect race day and thousands of out-of-town cars were in the city for the day.

Our new 1,500 kva. substation at Montville was put into service as per schedule, June 15. The operation of this substation relieves the very badly overloaded Montville feeder. The manufacturers it serves were greatly pleased when it went into operation. One of them, The J. P. Martin Company, showed its appreciation by sending the construction crew at the substation a box of cigars.

The Fourth Annual Convention of the New England Managers was held in New London at the Mohican Hotel, June 28, 29, 30. A number of very interesting and instructive papers were read followed in each case by a discussion. The business program arranged was as follows:

WEDNESDAY, JUNE 28, 1922.

9.00 A. M.—*Morning Session*

Welcome . . . . . MR. V. E. BIRD, New London, Conn.

Address . . . . . MR. H. H. HUNT, Boston, Mass.

Newspaper Advertising . . . . MR. C. W. KELLOGG, Boston, Mass.

(Read by MR. R. H. WILLIAMS)

Discussion

The Assistant Treasurer

and his Department . . . . MR. J. T. G. NICHOLS, Boston, Mass.

Discussion

Measurement of Fuel

and Oil Supply . . . . . MR. TOM P. WALKER, Haverhill, Mass.

Discussion

1.00 P. M. . . . . *Luncheon in Mohican Ballroom*

2.00 P. M.—*Afternoon Session*

Public Policy Advertising and

Education of Employees . . . MR. J. P. INGLE, Haverhill, Mass.

(Read by MR. W. R. BELL)

Discussion

Merchandising . . . . . MR. ATHRUR L. KEBBE, New London, Conn.

Discussion

THURSDAY, JUNE 29, 1922.

9.00 A. M.—*Morning Session*

New Hartford Residential Lighting

Rate and Effect of This Rate in

Increasing the Use of Elec-

tricity . . . . . MR. V. E. BIRD, New London, Conn.

Discussion

Desirable and Undesirable Power

Loads from the Standpoint of

the Central Station . . . . MR. P. J. WILSON, LOWELL, Mass.

Discussion

Experiences in Purchasing Trans-

mitted Power . . . . . MR. GARDNER ROGERS, Pawtucket.

Discussion

Reminiscences of Recent Trips . MR. H. A. LEMMON, Boston, Mass.

Discussion

1.00 P. M. . . . . *Luncheon in Mohican Ballroom.*

2.00 P. M.—*Afternoon Session*

What the National Electric Light

Association Is Doing. . . . Mr. M. H. AYLESWORTH, Executive Manager,  
New York City

Discussion

FRIDAY, JUNE 30, 1922

9.00 A. M.—*Morning Session.*

Inter-Company Relations . . . Mr. M. L. SPERRY, Boston, Mass.

Discussion

Fire Protection and Fire Drills . . . Mr. N. H. DANIELS, Boston, Mass.

Discussion

Remodeling the Street Lighting-  
ing System . . . . . Mr. W. A. FORBUSH, Brockton, Mass.

Discussion

Importance of and Plans for De-  
veloping Industrial Use of Gas . . . Mr. H. VITTINGHOFF, Boston, Mass.

Discussion

Committee's Report on Automom-  
bile Accounting . . . . . Mr. J. E. NUTE, Fall River, Mass.

Discussion

1.00 P. M. . . . Luncheon in Mohican Ballroom

Mr. AYLESWORTH was unable to be present Thursday afternoon but we were very fortunate in having Mr. EDWIN S. WEBSTER come down to New London and give an exceptionally interesting talk about his recent trip to Japan and China.

Two other members of the firm were present at the convention, MESSRS. SAWYER and HUNT. Mr. SAWYER gave a very interesting talk about Stone & Webster's activities in coal mining and Mr. HUNT an optimistic talk on general business conditions and public utilities.

By way of social relaxation, a dinner was held in the Mohican Ballroom on the evening of June 28. Following the dinner members of the CoPoCo Club gave an entertainment consisting of a short comedy sketch entitled "Say It With Flowers," and some novelty dances. Mrs. Viggo E. Bird sang several Danish, English and French Folk Songs.

Thursday evening a dinner-dance was held at the Hotel Griswold, Eastern Point. The Companies represented were: The Pawtucket Gas Company, Haverhill Gas Light Company, Fall River Gas Works Company, The Connecticut Power Company, The Lowell Electric Light Corporation, Blackstone Valley Gas and Electric Company, Edison Electric Illuminating Company of Brockton, The Electric Light and Power Company of Abington and Rockland.

MESSRS. SMITH and KEBBE are attending a two weeks' course in Industrial Gas Engineering at the Massachusetts Institute of Technology.

Mr. BRUCE HYDE, Yale '23, has joined the Engineering Department for the summer.

Mr. S. Ferguson, vice-president of the Hartford Electric Light Company visited us during the month.

The 750 kva. substation at the Robert Gair Paper Company in Montville was put into service July 2.

PADUCAH, KY., JUNE 24

General business conditions in the territory served are rapidly improving. All

contracting firms are unusually busy at this time on account of the spring building boom that is well under way, and local dealers in building materials report a very good month for June.

The city let a contract on June 23 to the E. R. Harding Co., of Racine, Wis., for the entire sewer construction work for the sum of \$508,000. Work is to be started in about twenty days, and this will give employment to a considerable number of men.

The new building of the Paducah Milling Company is now completed and machines are being set. Mr. Davis expects to begin active operation about July 1.

The Illinois Central Railroad are gradually adding to their working force at the shops and expect to have a normal force in a very short time.

The tobacco market is very quiet at present. Last year's crop is practically sold out and the farmers are now busy with their planting of the 1922 crop. Farmers report that rain is needed very badly at this time.

Both retail and wholesale dealers state that the volume of sales is gradually increasing and that the general trend is very encouraging.

The outlook of both Companies is clouded by the conditions which prevail in the coal market.

High priced coal will materially effect the year's showing if we are forced to purchase it for a period of two months or more.

Building permits for June were below those of May, but there is still a great many contracts being let for reconstruction and remodeling, and in general, the building activity is very pleasing.

As yet, Paducah has not seriously felt the undercurrent of labor agitation, and the general feeling among the coal miners and railroad men in this district appears on the surface to be much more optimistic than in many other railroad and mining centers.

Several local manufacturers are advertising for additional help and with the starting of the new sewer work there will be plenty of work for everyone.

MR. L. V. SMITH has arrived from Keokuk to take up the duties of assistant treasurer of these companies.

MR. F. CLOEN, general superintendent, and MR. CHARLES GILLEN, line foreman, recently attended a convention of distribution men, held in Louisville.

MR. N. Y. WILCOX, of the Mississippi River Power Company, was a visitor to these companies during the month.

MR. R. ALLYN HAIOSH, of the manager's office, was married on June 21 to Miss Elizabeth Adams. The ceremony took place at Ann Arbor, Mich., the home of the bride.

On June 22, the Elec-Trac Club held a banquet and election of officers at the Palmer Hotel. After the business session, the members of the various departments displayed their prowess in song. Short talks were given by MR. A. S. NICHOLS, MR. F. CLOEN, MR. W. C. SHIELDS, MR. L. V. SMITH and others. The following officers were elected: MR. CHARLES GILLEN, line department, president; MR. L. B. RAGLAND, railway department, vice-president; MR. E. R. BOATMAN, accounting department, secretary; MR. L. V. SMITH, assistant treasurer, treasurer.

MR. H. R. DALLAN, MR. F. S. HARPER, and MISS ETTA MCNEELY, of the accounting department, are enjoying their annual vacations.

MR. J. W. MCNEELY, railway superintendent, has returned from a business trip to Youngstown, Ohio and Terre Haute, Indiana.

Plans are under way and money has been raised among company employees, to build a new club house at Metropolis Lakes.

The manager recently took a party of Paducah business men on a fishing trip to a point near Golconda, Ill., on the Ohio. The return trip was made at night, despite the perils of navigation on the lower Ohio. The pilot lost his way because the government lights marking the channel were not burning and the boat grounded upon a sand bar, which was not cleared until two o'clock in the morning. The party arrived in Paducah as day was breaking.

#### PAWTUCKET, R. I., JUNE 23

Business conditions are steadily improving and greater optimism prevails in all the varied industries of this locality. Manufacturers state that due to the disposal of heavy stocks carried, it has had the effect of stabilizing prices and stimulating a demand for all sorts of fabrics.

Many of the mills that have been hampered by the strike, report sufficient number of operatives to run all departments, and most of the large mills state that they are operating about 75 per cent normal.

The silk manufacturers report a steady improvement in the demand for silk goods. While the orders are not for large quantities, yet a marked improvement prevails over former months.

The woolen manufacturers are not wholly satisfied as orders are comparatively small, but the worsted concerns are fairly well pleased, as most of them are sold up to August.

The cotton goods market has been somewhat unsettled, with higher prices noted. Manufacturers say orders must be forthcoming for large quantities of cloth, due to exhaustion in the present stocks.

The fancy textile concerns report a good demand for their goods and the Wayposet Manufacturing Company (one of the largest) is running its carding and spinning department night and day in order to supply sufficient yarn to operate the looms.

Wholesale and retail merchants report that due to the continuation of the strike in the Blackstone, as well as the Pawtuxet Valley, the sales are not what they should be, but every indication points now to a petering out of the strike, which will, in turn, very favorably effect both wholesale and retail conditions.

Notwithstanding strike conditions which materially reduced the demand for both power and gas, we have every reason to be satisfied with present conditions.

Building operations are on a much larger scale than a year ago. The masons and carpenters are fairly well employed. The largest piece of work under construction at present is the erection of another mill by the Hope Webbing Company, which will cost \$145,000. A surprising number of permits are being issued by the city for garages. Two of our largest French parishes have contracted for the erection of churches and other buildings, representing very nearly \$700,000.

A very active business is being carried on by real estate dealers. It may be of interest in this connection to note that the Rhode Island Hospital Trust Company was the favored bidder for \$375,000 worth of city bonds at four and one-quarter per cent with interest.

Labor is fairly well employed, and many of the strikers have returned to work, although quite a number have not gone back to their previous positions, but have taken employment in other mills. There has also been quite an exodus of mill workers to Fall River and New Bedford.

The city of Pawtucket is doing considerable sewer and street work, and has provided for the unemployed, so conditions are very much better than they have been for months past.

Unusually heavy rains have militated against all sorts and conditions of outside activities, as they prevailed the greater portion of the month, and the damage to streets, telephone and electric cables has been severe.

The last meeting of the Gas and Electric Club of Pawtucket, was held on Tuesday evening, June 6.

MESSRS. H. T. EDGAR and M. L. SPERRY, of the Boston office, and Mr. and Mrs. J. P. INGLE, of Haverhill, were our guests at this meeting and parties were also present from the Fall River, Brockton and Woonsocket companies. After a short business meeting, Mr. EDGAR gave a most interesting and instructive talk on "The Organization of a Public Utility Company." An amusing entertainment in the form of a minstrel show was presented by the Entertainment Committee. Mr. R. H. FARLEY, of the sales department, was interlocutor and his end men were: MESSRS. HAROLD EDLUND, D. T. LENNON, JACK QUINN and L. TRAVERS. Some of the stories and a patter chorus sung by D. T. LENNON and HAROLD EDLUND contained some very clever "personal hits" on members of the company organization and a few of the guests present.

Solos were rendered by the MISSES KATHERINE JEFFREY and JENNIE MORIARTY and RALPH GAUTHIER. After the show, refreshments were served and dancing was enjoyed the remainder of the evening.

A company baseball league of five teams has been organized and the first game of the season was played on Tuesday evening between the office team and No. 1 station team. The office team won by a score of 14 to 4. The season was opened officially with ROLLIN BUCKMINSTER pitching the first ball, GARDNER ROGERS catching and CAPTAIN MCGREGOR at the bat, and Mr. PERELY was official umpire. According to witnesses, the pitching of Mr. BUCKMINSTER was the feature of the game.

The marriage has been announced of Miss GRACE RAMPE, of the engineering department, to Mr. William C. Hickey, on Tuesday, June 6. After a short trip Mrs. HICKEY will again take up her duties in the engineering department.

Mr. and Mrs. A. K. MACNAUGHTON announce the birth of a nine pound son on Wednesday, June 21.

On Wednesday evening, June 7, the final bowling match between the Fall River and Pawtucket teams was held at Rhodes, outside Providence, the Fall River team coming out as victors. Quite a contingent of spectators attended the match and afterwards stayed through the evening to dance in the Rhodes Pavilion. Both companies voted it a most enjoyable party.

#### PENSACOLA, FLA., JUNE 21

Local industries show considerable improvement in activity over that prevailing several months ago, but are still far from normal. The Bruce Dry Dock has been very active for 60 days, and indications point to continued, and perhaps increased activity. The Newport Company which resumed operations several months ago, after idleness of two years, reports normal operations and increased efficiency.

Pensacola Shipbuilding Company is operating a small force of men engaged in fabricating steel bridges, buildings, etc., and they state that the outlook for the future is brighter than it has been for some time. The American Agricultural Chemical Company, which has been idle for several years will probably remain idle until

next winter. Pensacola's newest industry—the Weis-Patterson Lbr. Company, Inc., is now operating at full capacity. This corporation employs about two hundred men at good wages. The new plant of the Pensacola Creosoting Company, formerly Southern Paving Construction Company, is being completed and during the next 30 days they should commence active operation in their line. This industry will be a very active one, and will bring to the city an increased payroll of several thousand dollars per week.

Very much improved conditions in the outlying agricultural sections during the past few months have brought about a satisfactory condition in the wholesale business. The agricultural sections have produced splendid crops of potatoes, cucumbers, cantaloupes, etc. It is interesting to note that the country immediately contiguous to Pensacola has shipped up to date, over one thousand two hundred carloads of potatoes to the East and Middle West.

Retailers state that the arrival of the hot spell in June was not without its advantages since it produced a market for a large quantity of summer goods which had previously not been disposed of. The situation as a whole in the wholesale and retail business at this time is satisfactory.

The condition of the Company's light and power business and outlook for the future is satisfactory. For the past few months we have mourned the loss of the business of the U. S. Naval Air Station, after they started the operation of their central power plant. The operation of this plant, however, proved troublesome and expensive, and the authorities have accepted our proposition for furnishing their total requirements of electric current for the coming 12 months.

The freight department has an outlook for the next 12 months which is very bright. Road construction on the Gulf Beach highway; construction of the flying field at the Naval station, and the large increase in business brought about by the Weis-Patterson Lbr. Company, and the Pensacola Creosoting Company will mean an increase in freight earnings during the coming 12 months.

During the past month, ten new brick stores have been constructed on North Palafox Street and are now occupied. These new stores practically fill in a block heretofore not used for business purposes and indicate a spread of the business district beyond the bounds previously occupied.

A large number of residences are being built in all sections of the city.

The unemployment situation has been greatly relieved by the inauguration of active construction work on the highway program in Escambia County.

The Naval Air Station has recently put on 120 skilled and unskilled men, who will remain as permanent employees.

The opening of Saufley Beach on Santa Rosa Island, during the month, afforded a bathing resort for inhabitants of Pensacola again, after a lapse of several years. During the war, and for some time afterward, Santa Rosa Island was barred against visitors on account of the fact that the government had so many activities there in the line of aviation work.

During the summer, excursions will be run from various points in Alabama and thousands of people will take advantage of this opportunity for bathing in the gulf.

MESSRS. J. E. D. YONOR and C. L. SHINE, of our legal department, have returned from Tampa where they went on combined company and personal business.

MR. J. G. HOLTZCLAW has returned from Columbia, S. C.

Bayview Park, the city-owned bathing resort, is proving a greater attraction than ever, this summer.

On June 22, the Women's Club of Escambia County will stage an Historical Pageant at the Park which will undoubtedly be attended by thousands of people.

The new city administration took charge of the city affairs on Monday, June 12. The newly elected Commissioner, Harvey Bayless, was elected Mayor by the other two commissioners, and former Mayor F. D. Sanders took over the department of streets and public works. Commissioner F. R. Pou remains in control of the police and fire department.

#### PONCE, P. R. JUNE 26

Local industries are not operating to any considerable extent at this time, and practically all sugar mills have closed down for the season. This condition also exists in the coffee industry. In the tobacco industry, while there is some manufacture of cigars, conditions are far from normal and probably only about 50 per cent of last year's production is being made at present.

Wholesale and retail business is some below normal, although the increased price of sugar and coffee has helped the wholesale merchants a little. In the retail business practically all sales are for necessary commodities and expensive and unnecessary materials do not find a ready market.

There is very little activity in real estate at the present time, although several lots have been sold on the Vija, the section in which this company purchased their lot recently for a trolley home.

While it is possible to secure all the labor that is necessary, the condition has not reached a point where there is any considerable reduction in common labor rates.

On May 27, fire of unknown origin destroyed the building on the northeast corner of the Plaza in Ponce, which property is owned by the Royal Bank of Canada.

On June 8, MR. RALPH C. PAINE came to Ponce as an engineer in our power station, coming here from the Woonsocket plant of the Blackstone Valley Gas and Electric Company.

On June 14, MR. PAUL F. HANNAFORD, who has been assistant chief engineer at the power plant since January 7, 1920, was transferred from this company and will be placed after his arrival in Boston. He was accompanied by Mrs. Hannaford, who has been with him in Porto Rico since their marriage in September, 1921.

MR. GEORGE E. MUNT, who succeeds Mr. HANNAFORD as assistant chief engineer, will sail for the States on June 29 for a vacation of four or five weeks. Mr. MUNT has been an engineer in the plant since November, 1920.

#### RENO, NEV., JUNE 30

The most important local industry affecting the company, the mining industry, continues to show decided activity. This activity is particularly noticeable in the number of prospective mines, although the company's most important mining customer is continuing to carry forward its work on schedule.

Local wholesale houses report that this year's business continues in excess of the corresponding month for 1921, with collections very good in the mining districts, but rather slow, as is to be expected, in the agricultural districts. The outlook continues encouraging with prospects of a slow but steady improvement in conditions.

The retail business remains dull with no immediate prospect of any improvement, except that resulting from some additional money coming into the district, as the result of the final payments on this year's wool clip.

Banks report that while there is sufficient money available to care for all legitimate requirements, such as financing the ranchers, it is possible to loan on good security all the money available.



In Reno, the annual summer race meet is now under way with normal attendance. As a result of the visitors attending this meet and the destruction by fire of the Riverside Hotel, some months ago, hotel accommodations are at a premium.

During the past month, the company's largest individual customer, the United Comstock Pumping Association, discontinued all pumping in its mines. This will result in a decrease in the company's power load of possibly 600 kilowatts. This loss, however, will be largely offset by load increases already definitely agreed upon, and in fact, may possibly have the result of making it necessary for the company, in the immediate future, to install additional generating capacity to care for prospective mining customers' power requirements. One of the company's present customers, which has been using 500 kilowatts during recent years, has now completed the installation of additional capacity which will require approximately 100 kilowatts additional.

It is rumored that negotiations have been resumed, having to do with the development of the "Middle Mines Group" at Virginia City. It has also been announced recently that a new company has been organized to take over three or four mines east of Virginia City under the name of the Flowery Comstock Mining Company.

The decrease in building costs has apparently convinced the general public that the present is a favorable opportunity for new construction. A large number of new small dwellings are under construction in Reno, the number being at present limited by the labor available in the district.

Although government statistics show that in this district some unemployment exists, so far as can be learned, there are more jobs available than men to fill them. This applies to mines where at least 600 hundred additional men are required to the building construction trade, where the amount of work to be started is limited by lack of labor, and to the ranches, where it is reported that the owners are unable to secure the labor in as large quantities as is necessary.

The past month has been exceptionally warm, the average temperature in Reno for the month exceeding that of any June within the past 20 years. As a result, farm crops are in very good condition. The cutting of the first crop of alfalfa is now under way, which is at least as early in the year as the first cutting is usually made. The range conditions in the hills are better than at any time during the past five years, with the result that the sheep and cattle industry is in an improved condition, notwithstanding the heavy losses resulting from the cold spring.

MR. GEORGE A. CAMPBELL, manager, was in San Francisco on business from June 23 to the 29th.

MR. J. E. MURRAY, chief clerk, has recently purchased a new Chevrolet automobile, and, while his first two attempts to leave the city and return the same day were not very successful, he reports that on his last expedition he really got home without being towed.

MR. WENTWORTH, MR. MASON and MR. CLIFFORD attended the convention of the N. E. L. A. in Los Angeles during the month.

#### SAVANNAH, GA., JUNE 24

The present outlook for industrials is not very favorable. With the exception of the American Agricultural Chemical Company, which has resumed partial operation, the fertilizer plants are at a standstill, and it is probable that they will not resume extensive operations until fall. An exception to the unsatisfactory status of local industries is the sugar refinery which has continued daily operation with its capacity output of 1,500,000 pounds per day.

The shipping business has shown increased activity during the past few weeks; several large shipments of sugar, lumber, naval stores and cotton having been made recently.

Shipments of lumber from this port since September, 1 1921, total 43,041,000 feet, of which amount 6,204,000 feet were shipped to foreign ports.

The cotton and naval stores markets continue steady. The turpentine market is unusually active with a recent sharp advance in the price. The last quotation was \$1.40 $\frac{3}{4}$  per gallon.

The continued curtailment of industrial operations in Savannah is clearly indicated in our station load. However, the production of our plants this month is showing a substantial increase over that of May.

A considerable amount of new building is now going on, which consists principally of new apartment houses and residences, and there is a noticeable increase in real estate activities.

MANAGER R. C. BROOKS made a business trip to Atlanta the early part of the month.

MR. D. W. KERR, who has recently been appointed chief clerk for the Columbus Electric and Power Company, visited this office on his way to Columbus from Boston.

The largest attendance in the history of the association crowded the auditorium in the Thunderbolt Casino at the regular meeting of the Savannah Electric Benefit Association, held on June 7. The attendance of members and their families numbered nearly 600. The usual program of business and community singing preceded the entertainment, which was in the form of a minstrel show given by the members of the transportation department and mechanical department. The minstrel was under the direction of MR. E. T. JONES, clerk in the transportation department, and was cleverly gotten up, providing much amusement. Dancing was enjoyed after the show.

MR. H. C. FOSS, district manager, with his family left Savannah the early part of the month for the North where they will stay several weeks.

MR. JOSEPH JACOBS, superintendent of power, Columbus Electric & Power Company, with his family spent several days in Savannah during the month.

MR. A. F. SOLMS, claim agent, has returned from a three weeks' trip to San Francisco where he attended the Shriners' Convention as a member of the Patrol of Alee Temple, Savannah.

MR. C. J. HARVIN, of the engineering department, spent several days in Savannah the early part of June.

MR. FRED FLETCHER, assistant manager, Tampa Electric Company, passed through Savannah on his way to San Francisco where he attended the Shriners' Convention.

Seventeen of the thirty new Birney Safety Cars have arrived in Savannah and will be put in service at an early date.

A baseball game between the transportation department and the office employees played on June 21, resulted in the defeat of the office by a score of 6 to 3.

On June 21, MR. L. E. DAVIS, who recently was transferred to this company from Pensacola, left for Key West where he is to succeed MR. ROY WATSON who was obliged to return to Savannah because of the serious illness of his wife. MR. WATSON has taken up his duties in the power plant as engineer.

MR. CHARLES DRUMMOND, who was formerly a member of the accounting department, has joined this organization again as clerk in that department.

Plans are being formulated for the Annual Benefit Association outing. Mr. M. B. PURSE, superintendent of the installation department, has been selected as chairman of the outing committee.

SEATTLE, WASH., JUNE 26

Lumbering is in excellent condition in this district. The mills have been running during the month to capacity on one shift and a number of mills are now putting in two shifts. As a result of this excellent condition in lumbering, all the kindred industries, sash and door factories, shingle mills, and wood working plants, have picked up.

Fishing conditions are very quiet, with the possible exception of the halibut industry, and indications are very uncertain as yet as to this year's pack.

Local small fruit conditions are good. The strawberry season was somewhat limited, due to a longer period of dry weather than is normal at this time of the year. Berry-growing and agricultural conditions are good and all indications are for large crops.

The coal mines under open shop conditions are doing reasonably well.

Wholesale business is doing reasonably well. The retailers as yet are only buying in small quantities.

The retail business has carried unusually well into the summer and conditions seem to be steadily improving.

Condition of the company's business is following very closely the improvement in local industries, we being affected almost directly by the prosperity of other local industries.

Real estate is very quiet, being very much below normal for this time of the year. The only trading taking place is in small home tracts, especially in the near suburban districts.

Building activities are good and seem to be improving. At the present time Seattle is experiencing a very pronounced growth in apartment buildings, with a few large business structures being built. Announcement was made this week of a new three million dollar building to be erected on Second Avenue.

Employment conditions in this district are very satisfactory. At the present time, there is no unemployment, the lumber mills and the berry farms having absorbed all of the surplus labor. In the lumber industry, conditions have improved to such an extent that recently a slight raise in wages was put into effect; the raise was approximately five cents an hour.

MR. S. L. SHUFFLETON, district manager Stone & Webster, Inc., Division of Construction and Engineering, and Mr. W. D. SHANNON, superintendent of construction, are in Seattle engaged in starting the work on the Wenatchee extension, which was temporarily postponed last February. The organization of field parties to survey one of the two routes under consideration has been effected and work will commence in the immediate future. A party composed of A. W. LEONARD, president, Mr. D. C. BARNES, manager, Seattle division, Mr. H. J. GILLE, sales manager, Mr. G. E. QUINAN, chief electrical engineer, and Mr. SHUFFLETON left Seattle for Wenatchee on June 21 to examine the proposed routes. Construction will follow the work of the field engineers. Local purchases for the line are being made through the purchasing department of the Seattle division.

The formal opening of the Vacation Lodge is announced for July 9, although there are already guests of the company occupying the main building. A number of reservations have already been made for the summer covering the vacation period,

and in every way the scheme providing employees with a delightful outing place has been justified. The entire project has been named Norwood Lodge, after Mr. NORWOOD W. BROCKETT, tax agent, who has been enthusiastic in promoting the plan of the vacation place at Lake Tappa. The main building has been named Leonard Hall, and other buildings are to be christened in honor of other company officials.

MR. A. L. KEMPSTER, formerly manager of the Seattle division, Puget Sound Power & Light Company, now general manager of the New Orleans Railway & Light Company arrived in Seattle with his family Tuesday morning to spend a part of the summer.

MR. H. B. SEWALL, manager of the Bellingham division of the Puget Sound Power & Light Company, was a visitor at the company offices in Seattle on June 23.

The prospect of Seattle having a great tourist hotel seems nearer than at any time since it was discovered that the local hotel accommodations do not meet with the tourist demand. A company is being formed that will lease a block in the heart of the city from the Metropolitan Building Company, which leases a large tract from the University of Washington, of which the proposed hotel site is a part. It is planned to build a hotel that will cost between two and three million dollars. A part of the block is occupied by the Metropolitan Theatre and the hotel is to be built around the theatre and on the three other frontages of the block.

#### SYDNEY, N. S., JUNE 24

The local fertilizer plant which had been operated at full capacity and double shift during the winter was recently obliged to close down owing to lack of slag, which is supplied to them by the Dominion Iron & Steel Company, Limited.

The conditions in the mining districts have not materially changed. The output is somewhat irregular owing to the limited markets. Several shipments of slack coal have been made to New England gas companies.

The Scott Conciliation Board, which recently investigated the wages and conditions in the local mining districts, recommended a minimum datal wage rate of \$3.00. This is the same wage as the company agreed to pay some time ago but which was turned down by the Miners' Union. At present, the minimum datal wage paid is \$2.85, as recommended by the Gillen Conciliation Board held early in the year. The Commission also recommended improvements in the housing and sanitary conditions in the mining districts. It is probable that the miners will take a vote on the new Scott Conciliation Board award the latter part of this month.

The Steel Company's plant at Sydney mines remains entirely closed, but the plant of the Dominion Iron & Steel Company at Sydney is gradually increasing its output. It is understood that they have several small orders for steel products.

Conditions in wholesale and retail lines continue to be very quiet, and the volume of business handled is light.

There is at present considerable activity in residential building in Sydney. Other lines of building are comparatively dull.

Residential real estate in Sydney is at present fairly active.

Employment conditions are improving throughout the local districts. This improvement is noticed chiefly in the farming, fishing and building construction groups. Mining conditions are substantially the same as in the several months past. Employment at the local Sydney steel plant is improving.

MESSRS. WILLIAMS and SHERBURNE, of the auditing department are at present making an audit of the company's books.

MR. J. B. BULLEY, railway superintendent, left on June 22, for St. John's, Newfoundland, having just received word of the death of his mother.

MR. THOMAS J. BUCKLEY, who has been in our employ as general storekeeper and electric express shipping clerk for the past several years, left for Boston to accept a position there.

A new steel stack at our Sydney power house has recently been completed.

#### TACOMA, WASH., JUNE 24

Business is good in sawmills and brisk in woodworking mills. All are running full time and the full number of shifts normally operated.

Retail business is only fair with the exception of automobiles. Deliveries of Fords, Chevrolets and Dodges have been especially heavy; more expensive cars are moving slowly. Wholesale houses report a quiet market, buying being largely hand-to-mouth.

Receipts of the Tacoma companies are only fair at the present time. If present lumber conditions continue throughout the summer, a decided revival in business is expected during the winter.

The real estate market is fair, though normally quiet at this time of the year. While no large building projects are under way, the building of small houses is keeping up, and mostly in the older parts of the city, filling up vacant lots. Much repair work and remodeling of old buildings is under way, so that there is a shortage of labor in the building trades.

The marked improvement in labor conditions has resulted in an increase of the four L scale of five cents an hour, the new minimum daily wage being \$3.40. Mill men are advertising for help and their association has made inquiry of the public employment bureau of California regarding the possibility of engaging help through that office. Road building, reclamation work and building construction can absorb all idle men who wish to work.

At the election held June 21 by the stockholders of the Citizens Hotel Corporation of Tacoma, Mr. R. T. SULLIVAN, manager of the Tacoma companies, was selected as a member of the board of trustees for the term of one year. The board is comprised of 15 members.

Mr. Walter Jackson, of Mt. Vernon, New York, street railway expert and originator of the Weekly Pass, arrived in Tacoma, June 17, to make an investigation of local traffic conditions in connection with the installation of the Weekly Pass on our city lines.

Mr. G. A. DEHASETH, formerly manager of the Ponce Electric Company, Ponce, Porto Rico, arrived in Tacoma on June 16 for an extended visit.

COL. H. G. WINSOR, superintendent of investigations and adjustments of the Tacoma companies, will be in camp for two weeks during July in command of the 146th Field Artillery at Camp Murray, Washington, located about 12 miles south of Tacoma.

Mr. K. C. SCHLUSS, superintendent of power and equipment, attended the Northwest Electric Light Association Convention held at Boise, Idaho, June 7 to 10.

Mr. WILLIAM N. RINGROSE, who was transferred from the Bellingham office, has been appointed chief clerk, assistant treasurer's office, Tacoma.

Mr. JOHN HICKOK, superintendent of railways, and Mr. M. E. WILLIAMS, freight traffic agent, Bellingham division, were visitors at the Tacoma office on June 21.

A very pleasant evening was spent by office employees and officials at the entertainment and supper dance given on June 9, at the Bay View Lodge, by the Work

and Play Club, recently organized by employees of the Tacoma companies. There were 145 in attendance.

Following the custom of past years, the Tacoma Railway and Power Company entertained the Commission Safety Scouts of the Public Schools at the Annual Safety Scout Picnic at Spanaway Park, Saturday, June 17. The students of each school who were guests at this picnic were those adjudged to have shown the greatest interest in Safety throughout the school year. Besides the students, the principals and two teachers or members of the Parent Teachers Association were invited to attend. Free transportation to and from the park was provided and a luncheon served.

On June 17, the official 1922 opening of the Rainier National Park was celebrated by a floral automobile parade in Tacoma, preceding the trip into the park. The mayors of Portland, Seattle and Tacoma, as well as the Governor of the state, participated in the celebration. One of the chief events of the Park season will be the fifth annual ski tournament under the auspices of the National Park Ski Club on July 2, 3, and 4. Paradise Valley in the Rainier Park, and Finse, Norway, are the only two places in the world where ski tournaments can be held in the summer months.

#### TAMPA, FLA., JUNE 22

The cigar industry is now operating at about seventy per cent of normal, with about six or eight of the largest factories employing full forces. Conditions have been improving steadily in this industry for several weeks. Fertilizer factories are active and another factory is a prospect within a short time.

An association of local manufacturers has recently been formed and is quite active in promoting sales of various articles made in Tampa.

Business through the port of Tampa has been making substantial improvement—phosphate, lumber and naval stores being the principal items of export.

Despite the October storm and the long drought of the spring of 1922, prospects for a good citrus fruit crop are excellent. The trees, with the exception of those immediately bordering the Gulf, are in good condition, and there is some June bloom. \$50,000,000 was received for Florida fruits and vegetables during the season recently closed.

Retail merchants report slightly improved conditions during the past couple of weeks. Normally, this is a dull season because of the large number of residents who leave the city for the summer.

Railway department earnings show a decrease, due principally to closing down of the shipyard. Lighting department earnings show about the normal rate of increase for the first part of the month. Future business conditions should show improvement within a short time due to the construction of country roads under the \$3,000,000 bond issue voted June 20. Cigar manufacturing normally increases during the early fall months on account of holiday orders, and the return of residents who have left the city for the summer assists in making business more active.

For the past couple of years real estate has been more active in Tampa during the summer months than the remainder of the year. This summer has not been so good, but it is felt that conditions are improving and the bond issue for good roads is expected to stimulate sales of property throughout the county, particularly where the new hard-surfaced roads are constructed.

Building activities are confined principally to the construction of homes, most of

these being in the suburbs, particularly in the sections between the city limits and Sulphur Springs and south throughout the Interbay Peninsula.

Employment conditions have been improving since winter transients left the city in the late spring.

The weather for June has been unusually dry, the deficiency in rainfall establishing a new record for the month of June to date.

MR. T. J. HANLON, JR., manager, visited the Boston office during June.

MR. F. E. FLETCHER, assistant to the manager, left Tampa, June 2, to attend the Rotary Convention in Los Angeles, and the annual Convention of Shriners in San Francisco, to which latter convention he was a delegate. MR. FLETCHER afterwards made a short visit with relatives in Oregon and will return to Tampa the first of July.

A class composed of employees of the meter department under the supervision of MR. W. D. HEARNE, meets every Thursday evening for the study of meters.

The Public Relations Club, composed of department heads, continues to hold semi-monthly luncheons to discuss matters of interest, betterment of service and public relations.

MR. EDWARD BROWN, assistant to the superintendent of transportation of the Jacksonville Traction Company, spent several days in Tampa in a study of Birney cars and their operation.

MR. C. T. SINGLETARY, a painter at the car house, fell from a scaffolding while painting the roof of the car house, sustaining injuries which resulted in his death shortly after he reached the hospital.

MR. J. CONNOR LAMB, sales manager of the Baton Rouge Electric Company, spent several days in Tampa during June visiting relatives.

MR. L. A. SARGENT, accompanied by Mrs. SARGENT and small son, left via automobile for Texas on a short vacation trip.

MESSRS. E. P. OWEN and P. J. HUNT, of the power station organization, are enjoying vacations—MR. OWEN with his family touring Georgia and Mr. and Mrs. HUNT spending a month with relatives in Michigan.

#### WOONSOCKET, R. I., JUNE 26

On May 29, the Woonsocket Gas and Electric Employees' Club held a stag party in Elk's Hall. Several company officials from Pawtucket and a number of local business men were our guests on this occasion. A lively entertainment was provided, consisting of a snappy chorus and dialect recitations by various members of the club, several pleasing vocal solos by MR. HAROLD KEEFE of the accounting department, and a demonstration of mind reading by MR. JAMES MULCAHY, who was very ably assisted by MESSRS. HARRY GREENHALGH, from a vantage point under the table, and ANSON WHEELOCK from the floor. The feature of the evening was a series of bouts between local leather pushers. The milling was lively, and the shouts of encouragement received from the spectators were well deserved. Hot dogs and coffee satisfied the inner man and everybody conceded that the evening was well spent.

MR. E. L. MILLIKEN and family attended the Commencement exercises of the University of Maine.

A number of employees were the guests of the Gas & Electric Club of Pawtucket at their June 6 meeting, to hear MR. EDGAR, of the Boston office, and to witness the minstrel show put on by the employees of the Pawtucket division.

C. B. HEALY, accountant, secretary of the local Kiwanis Club was selected as one

of the delegates to the National Convention of Kiwanis Clubs held in Toronto, Canada, the week of June 19.

The Woonsocket Gas and Electric Employees' Club held its last supper and meeting of the season on June 7, in the club rooms. Supper was served by the house committee after which the annual election of officers was held, resulting in the following slate of officers for the coming year: president, LEO F. YETMAN; vice-president, ORVILLE JENNISON; treasurer, WILLIAM WHEELOCK; secretary, T. HAROLD KEEFE. To serve on the board of governors two years, W. ORRELL DAVIS and FARQUHAR W. SMITH. To serve on the board of governors for one year, OMER CHARPENTIER and LOUIS CAYER. J. P. INGLE, of the Haverhill Gas Light Company then addressed us on "Putting New Wine In Old Bottles," a delineation of some of the problems confronting a public utility corporation, and an outline of their possible solution. Dancing followed Mr. INGLE's talk. Mr. H. T. EDGAR, of the Boston office was a guest.

One of the most disastrous fires, in the history of the city, occurred on the morning of June 10, completely destroying the Crowell and Buell Buildings and doing considerable damage to the Buckland and Clark Buildings. Help was called from outside cities to assist the local firemen. The top floor of the Buckland and Clark Building was entirely gutted. As a result our No. 2 station, which is located in the basement, was deluged with water. This station is the distributing center for the entire lighting system of the Woonsocket division. Prompt work on the part of company employees in covering up much of the apparatus, prevented a greater loss. In view of the serious nature of the fire, the interruption to the lighting service was of very short duration, and many commendations have been received by the company for its promptness in restoring service. Our club rooms, adjoining the station, were considerably damaged by water.

F. K. SIMMONS, industrial service engineer, recently made a short trip to New London and Middletown in connection with power development.

MR. E. L. MILLIKEN recently spent about a week in New Hampshire making a special power survey of the territory for the Boston office.



## Library Notes

*Administration of the New Era* is a pamphlet published by George H. Ellis Company and sent to us with their compliments. It tells a story of President Harding and the members of his cabinet, including also his Inaugural Address. Those who are interested in knowing how people rise to the highest offices will find this publication very much to the point. It will also be referred to as giving a list corrected to the change of Postmaster-General from Will H. Hays to Hubert Work.

*Cornell Alumni Directory* dated May 15, 1922, is typical of what we hope to receive from a dozen different universities and colleges, as we have frequent call to refer to such a list of graduates. When Boston has its "Community Catalogue," which has been talked about for a year or more, it is likely that we shall be able to look around the corner, as it were, for alumni directories that it is not practicable for us to have up-to-date in our own collection.

*Economics of Electrical Distribution*, by P. O. Reyneau and H. P. Seelye. In the design, construction and operation of an electrical distribution system, the goal should be to provide all consumers with good service at the least possible cost for the system as a whole. The desired results may be accomplished in part by a careful application of the principles of economics to all parts of the system. This book outlines these economic principles and their method of application in a very comprehensive manner. A large number of typical problems are cited in detail, and equations or formulae for the ready solution of each problem. The scope of the work covered by this book is very complete. The treatise should be of particular interest to the operating engineer.—R. R. W.

*The Americanization of Edward Bok*, autobiography of the Dutch boy 50 years after, is a stimulating book which we have in our library and which is in considerable demand. If you wish to read it, put your name down on the waiting list.

Directory of the New York Academy of Sciences and Affiliated Societies, 1922, is a book we are likely to consult

in order to follow up *Who's Who in Science*. In this connection, it would be well to mention that the Special Libraries Association of Boston has a Committee at work upon getting facts as to how to locate the addresses of people difficult to find. Special attention is being given to associations that have no other headquarters than the home of the secretary. If interested in this project, please communicate with our Library Department—particularly if you are able and willing to help in a somewhat formidable undertaking.

*Catalogue of Association Booklets*, published by Portland Cement Association. This is a 31 page, 3 x 6 booklet, which gives descriptive insight into many books and pamphlets on concrete. It does not appear to deal with reinforced concrete. but, by consulting the index, one will find that there are about one hundred different uses referred to. What a fine thing it will be, when booklets are issued for all the products we have need for: wood, iron, hardware, etc., etc. There is a movement afoot that may hasten the date when these will be forthcoming. Meantime, this little booklet affords a standard that others may do well to follow.

*McGraw-Hill Book Company* has recently published a 1922 catalogue in which the blue pages, to the number of 56, supplement the main body of the book containing the publications of previous years. It has copious indexes for both sections and is a useful guide to reference books in the engineering field.

*Poor's Rating Service*, What is it, What it does, Why you should use it, is described in a ten page leaflet issued by Poor's Publishing Company, 33 Broadway, New York. This service is a revival of the effort that was made in 1916 when business was so disorganized and there was such violent fluctuation in the stock market that it was abandoned until this year. Meantime, the company has been using the service privately so that there is now ample preparation for putting it on the market.

From time to time the Library is asked for a map of the United States. *Hammond's Comprehensive Map of the United States* with parts of Canada and Mexico, showing railroads,

can be handed out in response to such a request. Substantially all our other maps of the United States are contained in atlases. On the back of this is a population list for 1910, hence to be used advisedly.

The results of the *Convention of Managers and Secretaries* that was held at this office, October, 1921, are being put in pamphlet form and copies may be seen at the Library.

The following is a list to date:

"The Safety Car to Date", Mr. George H. Clifford; "Advertising to Increase Street Car Riding," Mr. Richard T. Sullivan; "Improving Relations Between Trainmen and Passengers," Mr. Thomas J. Hanlon; "Newspaper Publicity," Mr. Thomas L. Small; "Employees' Education," Mr. Alfred F. Townsend; "Getting Back to Prosperity," Mr. Charles A. Stone; "An Organization of Friends," Mr. Edwin S. Webster; "The Probable Future of Public Utilities," Mr. Russell Robb; "Frankness and Patience," Mr. George J. Baldwin; "Our Financial Difficulties During the War," Mr. Edwin S. Webster; "Centralized Public Utility Management," Mr. Henry G. Bradlee; "Transforming Public Opinion," Mr. Samuel M. Kennedy; "The Little Things," Mr. H. A. Lemmon; "Public Relations," Mr. C. W. Kellogg; "The Committee of One Hundred," Mr. Henry R. Hayes; "Our Business and the Outsider," Mr. J. P. Ingle; "Relations of the Managers to the Firm," Mr. A. Stuart Pratt; "District Co-operation," Mr. Luke C. Bradley; "Employees' Clubs," Mr. Harry T. Edgar; "Group Insurance," Mr. Joseph E. Nute; "Internal Co-operation in El Paso," Mr. Alba H. Warren; "Department Head Conferences," Mr. William E. Wood; "The Statistics Department," Mr. Nathan H. Daniels; "Training Employees," Mr. John A. Hunnewell; "Improving Public Relations," Mr. Alfred S. Nichols; "Activity in Local Business Organizations," Mr. Claude C. Curtis.

*Consolidated Subject Index to the Annual Reports and Water Resources Papers* is published by the Department of the Interior, Dominion of Canada. The general plan of this index has been to refer to principal subjects only, in order that it may be kept within such limits as will allow of its annual revision to include recent publications. It is not a gazetteer

of individual rivers and developments—for these refer in general to the province in which they are situated and the index in the volumes stated will give any details available.

Government Owned and Controlled compared with Privately Owned and Regulated Electric Utilities is what we call the *Murray & Flood Report*, which came this spring but was in such demand that Library did not finally get it for cataloguing for about three months. It is a publication of over 200 pages, with maps, diagrams, tables, and altogether a publication that goes to the bottom of the question discussed.

# Library of Stone & Webster, Inc.

## Recent Accessions

### (10) CIVIL ENGINEERING

- 264 The improvement of the St. Lawrence from the viewpoint of private capital. H. L. Cooper. 1922. 12p, 9x12, illus. *V*\*0732.C7853im
- 265 St. Lawrence waterway: report of the United States and Canadian Government Engineers on the improvement of the St. Lawrence River from Montreal to Lake Ontario made to the International Joint Commission—supplementary to Senate Document No. 114, 67th Congress, 2d Session. Senate Document No. 179. Wash., 1922. 104p, 6x9. \*6800.0732al3
- 266 Daily river stages at river gage stations on the principal rivers of the United States, Vol. XVIII, for the year 1920 . . . United States Department of Agriculture, Weather Bureau. Wash., 1922. 182p, 9x11½. \*6881.R524,1920

### (20) ELECTRICAL ENGINEERING

- 267 A simple harmonic analyser. V. Bush. An electromechanical device for rapid schedule harmonic analysis of complex wave. F. S. Dellinbaugh, Jr. Alignment chart for circular and hyperbolic functions of a complex argument in rectangular coordinators. V. Bush. Publications of the Massachusetts Institute of Technology—contribution from Electrical Engineering Research Division. Serial No. 28. Jan., 1922. 15p, 9x12. *V*\*071.B5635
- 268 A mechanical frequency-meter of telephonic range. A. E. Kennelly and C. H. Manneback. Boston, 1922. 10p, 6x9. *V*\*0716.K39lm
- 269 Radio instruments and measurements. U. S. Bureau of Standards, Circular No. 74. Issued March 23, 1918. Wash., 1918. 341p, 7x10. \*6898.C74
- 270 Drawing 200,000 horse-power from the Mississippi River . . . [In] Electrical Wonders of the World, Part 15. F. A. Talbot. (31)p, 8x11, illus. *V*\*0732.T1429
- 271 Reports of the Joint General Committee of the National Electric Light Association and Bell Telephone System on physical relations between electric light and signal systems. Edition of May 15, 1922. New York, 1922. 8p, 6x9. \*6921.0711p
- 272 Report of Electrical Apparatus Committee, Technical National Section. A. H. Lawton and others. [Presented at the forty-fifth convention of the National Electric Light Association, Atlantic City, N. J., May 15-19, 1922.] New York, 1922. 61p, 8x11, illus. \*6921.071ap.1922
- 273 Report of Hydraulic Committee, Technical National Section. M. Cheever and others. [Presented at the forty-fifth convention of the National Electric Light Association, Atlantic City, N. J., May 15-19, 1922.] New York, 1922. 51p, 8x11, illus. \*6921.0732h

### (40) MINING

- 274 Report of the Federal Trade Commission on the Pacific Coast petroleum industry: Part II.—Prices and competitive conditions, Nov. 28, 1921. Wash., 1922. 262p, 6x9, map. \*6892.P448.Pt.2
- 275 Coal: Its properties, analysis, classification, geology, extraction, uses and distribution. E. S. Moore. New York [c1922]. 462p, 6x9, illus. \*075.M7822
- 276 The Monroe gas field—Ouachita, Morehouse and Union Parishes, Louisiana . . . State of Louisiana, Department of Conservation. Bulletin No. 9, July, 1921. New Orleans, 1921. 99p, 6x9, illus, maps. \*3909.B9

## (73) INDUSTRIAL

- 277 Workers' education: American and foreign experiments. Arthur Gleason. Bureau of Industrial Research. New York [c1921]. 62p, 6x9. \*6839.In29am
- 278 The Industrial Council Plan in Great Britain. . . . Compiled by the Bureau of Industrial Research. Wash. [c1919]. 132p, 6x9. \*6839.In29w
- 279 The coal war in Britain: a study of working-class economics and trade union organization. (April-June, 1921.) Herbert Tracey. Bureau of Industrial Research. New York, 1921. 50p, 6x9. \*6839.In29st
- 280 Papers relating to service, publicity and education. G. H. Clifford, R. T. Sullivan and others before the convention of managers and executives of the Management Division of Stone & Webster, Inc., held in Boston, Oct. 10-18, 1921. 41p, 6x9. \*605.C769

## (75) ANNUAL REPORTS

- 281 Third annual convention of the American Gas Association, 1921: accounting section (141p); commercial section (190p); general session (232p); manufacturers section (74p); technical section (595p). New York, nd. 5½x8½. \*6961. 1921a.vol.3 . . . etc.
- 282 Twenty-seventh and twenty-eighth annual reports (seasons of 1920 and 1921) of the Boston Floating Hospital. Boston, 1922. 64p, 6x8. \*1461.F65.1920&21

## (76) LEGAL

- 283 State regulation of motor vehicle common carriers . . . Motor Vehicle Conference Committee. New York, 1922. 7p, 8½x11. \*03121.M8577
- 284 General rules and regulations: bays, sounds and lakes other than the Great Lakes, prescribed by the Board of Supervising Inspectors as amended at Board meeting of Jan., 1922—amendments approved by the Secretary of Commerce. Edition of April 7, 1922. Department of Commerce, Steamboat Inspection Service. Wash., 1922. 150p, 6x9. \*6890.St31.0294

## (77) UTILITIES

- 285 Report of the Nova Scotia Board of Commissioners of Public Utilities for the year ending Dec. 31, 1921. Halifax, 1922. 376p, 7x10. \*7280.P96.1921
- 286 Public Utilities Reports: containing decisions of the Public Service Commissions and of State and Federal Courts. 1922A. Public Utilities Reports, Inc., Rochester, 1922. 975p, 7x10. \*035.L449.1922A

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- 287 Register of graduates: Simmons College Bulletin. Vol. XV, No. 6, Pt. 2, May, 1922. Boston, 1922. 68p, 6x8½. \*1461.S1478.1922
- 288 Catalogue of Dartmouth College . . . 1921-1922. Dartmouth College Bulletin. Dec., 1921. Hanover, 1921. 228p, 5x8. \*093.D2557.1921-22
- 289 Twenty-fourth annual meeting of the associated Harvard clubs, June 16-17, 1922—reports of officers and committees. Supplement to Harvard Alumni Bulletin, May 25, 1922. 51p, 7x10. \*1445.H26al.1922
- 290 Boston University: the Year Book, 1921-22. Boston University Bulletin. Sept. 10, 1921. Boston, 1921. 425p, 6x9. \*093.B6577un.1922
- 291 Catalogue of Phillips Academy, Andover, Mass. 1921-1922. Andover, 1922. 94p. 5½x8. \*093.P539.1921-22
- 292 Bulletin of Yale University: general catalogue, 1921-22. New Haven, 1922. 720p, 5½x8½. \*093.Y12.1921-22

- 293 Cornell Alumni Directory: containing the foundation, history, and government of the University, the principal alumni organizations . . . May 15, 1922. Ithaca, 1922. 582p, 6x9. \*093.C81.1922
- 294 The Register, 1920-21—Cornell University Official Publication. Vol. XII, No. 17. Ithaca, 1921. 359p, 6x9. \*093.C81r.1920-21
- 295 University of Illinois annual register, 1921-1922. University of Illinois Bulletin. Feb. 27, 1922. Vol. XIX, No. 26. Urbana, 1922. 571p, 6x9. \*093.Un3.1921-22
- 296 Handbook of the American Economic Association, 1922. The American Economic Review. Vol. XII, No. 2—supplement—June, 1922. St. Albans, 1922. 100p, 6x9. \*6992.M51.1922
- 297 Year book—American Chamber of Commerce in France, 1922. Paris, 1922. 183p, 6x9. \*8110.Am35.1922
- 298 A list of American doctoral dissertations printed in 1920. . . . Library of Congress. Wash., 1922. 179p, 6x9. \*6808.096am.1920
- 299 List of publications of the Department of Congress available for distribution. 20th ed., May 1, 1922. Wash., 1922. 87p, 6x9. \*6890.096.5/1/22
- 300 The Heart of New England: map showing towns, cities and population of 1910; also, a practical map of Boston—clear, complete, accurate, thoroughly indexed—scale 400 ft. to the inch. The Bullard Co. Boston, nd. 37x44. V1000. B8728.061
- 301 The New England Business Directory and Gazetteer for 1922. . . . Sampson & Murdock Co. Boston [c1922]. 2442p, 6½x10. \*093.N42.1922
- 302 American newspaper annual and directory: a catalogue of American newspapers . . . 1922. Published by N. W. Ayer & Son. Philadelphia [c1922]. 1367p, 6½x9½. a\*093.Ay2.1922
- 303 The administration of a new era. President Harding's Inaugural address, with a brief account of the past careers and characteristics of the president, vice-president, and the members of the Cabinet, to whose collective wisdom the post-war problems of the United States have been committed for solution. . . . Published by Geo. H. Ellis Co., Inc., Boston, [c1922]. 48p, 7x11, illus. \*6800.H2199in

## MISCELLANEOUS

- 304 The American Bureau of Welding: the advisory board on welding, research and standardization of the American Welding Society and of the Division of Engineering of the National Research Council. New York, 1921. 24p, 7x10. \*6956.072
- 305 Cotton production . . . 1921. United States Bureau of Census. Wash., 1922. 35p, 6x9. \*6891.B140a.1921

## Coupons and Dividends Due

		Per Cent.
July 1,	Baton Rouge Electric Company, 7s (Coupon Notes), 1923.....	3½
July 1,	Blackstone Valley Gas and Electric Company, 5s, 1939.....	2½
July 1,	Cape Breton Electric Company, Ltd., 5s, 1932.....	2½
July 1,	Columbus Electric Company, 6s (Coupon Notes), 1922 (Principal also due).....	3
July 1,	Columbus Electric and Power Company, 2nd Preferred Stock 7 per cent.....	3½
July 1,	Connecticut Power Company, The, 5s, 1956.....	2½
July 1,	Eastern Texas Electric Company, Preferred Stock, 6 per cent.....	3
July 1,	*Eastern Texas Electric Company, Common Stock.....	2
July 1,	Electric Light & Power Company of Abington and Rockland, The, 7s (Coupon Notes), 1923.....	3½
July 1,	Electric Light & Power Company of Abington and Rockland, The, Capital Stock, 8 per cent.....	4
July 1,	El Paso Electric Company, 5s, 1932.....	2½
July 1,	El Paso Electric Company, 7s, Series A (Coupon Notes), 1925.....	3½
July 1,	*Haverhill Gas Light Company, Capital Stock, 9 per cent.....	2½
July 1,	Houghton County Electric Light Company, 5s, 1927.....	2½
July 1,	Houghton County Traction Company, 5s, 1937.....	2½
July 1,	Keokuk Electric Railway & Power Company, 5s, 1925.....	2½
July 1,	Mississippi River Power Company, 5s, 1951.....	2½
July 1,	*Mississippi River Power Company, Preferred Stock.....	1½
July 1,	New London Gas and Electric Company, The, 5s, 1933.....	2½
July 1,	Northern Texas Electric Company, 5s, 1940.....	2½
July 1,	Northern Texas Traction Company, 5s, 1933.....	2½
July 1,	Paducah Electric Company, 5s (Series A), 1924.....	2½
July 1,	Paducah Electric Company, 6s (Series B), 1924.....	3
July 1,	Pawtucket Electric Company, 5s, 1938.....	2½
July 1,	*Ponce Electric Company, Preferred Stock, 7 per cent.....	1½
July 1,	Reno Power, Light and Water Company, 6s, 1944.....	3
July 1,	Savannah Electric Company, 5s, 1952.....	2½
July 1,	Savannah Electric and Power Company 8 per cent Debenture Stock, (Series A).....	2
July 1,	*Savannah, Thunderbolt and Isle of Hope Railway, The, 4s, 1947...	1
July 1,	Sydney and Glace Bay Railway Company, Ltd., 5s, 1932.....	2½
July 1,	Woonsocket Electric Machine and Power Company, 4½s, 1931...	2½
July 10,	El Paso Electric Company, Preferred Stock, 6 per cent.....	3
July 15,	Keokuk Electric Company, 6s, 1923.....	3
July 15,	*Puget Sound Power & Light Company, Preferred Stock, 6 per cent.....	1½
July 15,	*Puget Sound Power & Light Company, Prior Preference Stock, 7 per cent.....	1½
July 15,	Puget Sound Power & Light Company, Common Stock.....	1
Aug. 1,	Baton Rouge Electric Company, 5s, 1939.....	2½
Aug. 1,	*Edison Electric Illuminating Company of Brockton, Capital Stock, 10 per cent.....	2½
Aug. 1,	*Fall River Gas Works Company, Capital Stock, 12 per cent.....	3

\*Payable quarterly.



	Per Cent.
Aug. 1, Galveston-Houston Electric Company, 7s (Coupon Notes), Series A and Series B, 1925.....	3½
Aug. 1, Galveston-Houston Electric Company, 8s (Coupon Notes), 1926	4
Aug. 1, Houston Electric Company, 5s, 1925.....	2½
Aug. 1, Key West Electric Company, The, 5s, 1956 .....	2½
Aug. 1, *Lowell Electric Light Corporation, The, Capital Stock, 10 per cent	2½
Aug. 1, Pensacola Electric Company, 5s, 1931 .....	2½
Aug. 1, *Public Service Investment Company, Preferred Stock, 6 per cent .	1½
Aug. 1, Public Service Investment Company, Common Stock .....	1
Aug. 1, Puget Sound Electric Railway, 5s, 1932 .....	2½
Aug. 1, Railway & Light Securities Company, Preferred Stock, 6 per cent	3
Aug. 1, Railway & Light Securities Company, Common Stock, 6 per cent.	3
Aug. 1, Seattle Electric Company, The, 5s, 1929 .....	2½
Aug. 1, Seattle Electric Company, The, 5s, 1930 .....	2½
Aug. 1, *Sierra Pacific Electric Company, Preferred Stock, 6 per cent .....	1½
Aug. 15, *Keokuk Electric Company, Preferred Stock, 6 per cent .....	1½
Aug. 15, *Tampa Electric Company, Capital Stock, 10 per cent .....	2½

\*Payable quarterly.

Dividend rates based on the last declaration.

# Quotations on Securities of Companies under Stone & Webster Management July 25, 1922.

The Securities Department executes orders on commission for those wishing to purchase or sell.  
Requests for information in regard to the companies will be answered promptly.

COMPANY	BONDS		PREF. STOCK		COMMON STOCK	
	Int. Rate	Price and Int.	Div. Rate	Price	Div. Rate	Price
Ab. & Rock., The El. { Notes, July, 1923 Lt. & Pr. Co. of	7%	100½	No	Pref	8%	125
Baton Rouge { Bonds, 1939 Elec. Co. { Notes, Jan., 1923	5% 7%	89 115	6%	86	10%	115
Blackstone Valley Gas & Elec. Co. (Common Stock par value \$50)	5%	96½	*6%	90	10%	71½
Cape Breton Elec. Co., Ltd.	5%	85	6%	63		12
Central Mississippi Valley Electric Properties	No	Bonds		73		10
Chicago, Wilmington & Franklin Coal Co. (Common Stock par value \$10)			*6%	†90	10%	†23
Columbus Elec. & Power Co.	6%	98	*7% 1st *7% 2d	98½ 88		75
Columbus Power Co., The	5%	95½		.....		.....
Connecticut Power Co., The	5%	93	*6%	89	8%	150
Connecticut Valley { Serial Bonds Lumber Co. { June, '23—'34	6%	100 96½				
Eastern Texas { Bonds, 1942 Elec. Co. { Notes, May, 1925	5% 7%	91 101	*6%	83	8%	91
Edison Elec. Illg. { Bonds, 1930 Co. of Brockton	5%	100	No	Pref	10%	†178
El Paso Elec. Co. { Bonds, 1932 Notes, 1925	5% 7%	93 101	6%	85	10%	123
Fall River Gas Works Co.	No	Bonds	No	Pref	12%	x†194
Galveston Elec. Co.	5%	87		.....		.....
Galveston-Houston { Notes, Aug., 1925 Elec. Co. { Notes, Feb., 1926	7% 8%	101 100	*6%	77 B L		34 B L
Galveston-Houston Elec. Ry. Co.	5%	87	No	Pref		.....
Haverhill Gas Light Co. (Stock par value \$50)	No	Bonds	No	Pref	9%	82
Houghton County Elec. { Bonds, 1927 Lt. Co. { Notes, 1923 (Stock par value \$25)	5% 7%	92 100	6%	19		12

COMPANY	BONDS		PREF. STOCK		COMMON STOCK	
	Int. Rate	Price and Int.	Div. Rate	Price	Div. Rate	Price
Houston Elec. Co.	5%	97 <sup>B</sup>		.....		.....
Jacksonville Elec. Co.	5%	88				
Jacksonville Tract. Co.	5%	81		35		5
Keokuk Electric Co. { Notes, January, 1923	6%	100	*6%	80		.....
Key West Elec. Co., The	5%	77		.....		.....
Lowell Elec. Lt. Corp., The	No	Bonds	No	Pref	10%	†181
Mississippi River Power Co. { Bonds, 1951 Debtentures, 1935	5% 7%	93½ <sup>B</sup> 102	*6%	81 <sup>A</sup> <sup>B</sup>		24¾ <sup>A</sup> <sup>B</sup>
Northern Texas Elec. Co.	5%	87	6%	85 <sup>B</sup> <sup>L</sup>	8%	93 <sup>B</sup> <sup>L</sup>
Northern Texas Traction Co.	5%	92	No	Pref		.....
Pacific Coast Power Co.	5%	94	No	Pref	No	Com
Pensacola Elec. Co.	5%	81		28		
Public Service Investment Co.	No	Bonds	*6%	†85		†68
Puget Sound Elec. Ry.	5%	87 <sup>B</sup>		.....		.....
Puget Sound Power Co.	5%	94	No	Pref	No	Com
Puget Sound Power & Light Co. { Notes, 1925 Bonds, 1941	8% 7½%	100 105	Prior *7% *6%	104 83	4%	48
Railway & Light Sec. Co. { First Series, 1935 Second Series, 1939 Third Series, 1939 Fourth Series, 1942 Fifth Series, 1944 Sixth Series, 1946	5% 5% 5% 5% 5% 5%	95½ 94½ 94½ 94 94 93	*6%	†89	6%	†80
Savannah Elec. Co.	5%	87 <sup>B</sup> <sup>L</sup>				
Savannah Elec. & Power Co.	7½%	105	*8% *6%	100 70		17
Seattle Elec. Co., The { 1st Mortgage, 1930 Cons. & Ref., 1929 Seattle-Everett, 1939	5% 5% 5%	99 <sup>B</sup> 94 90	No	Pref	No	Com
Sierra Pacific Elec. Co.			*6%	†77		7
Tacoma Ry. and Pr. Co.	5%	88	No	Pref		.....
Tampa Elec. Co.	5%	95	No	Pref	10%	136½
Whatcom County Ry. & Lt. Co.	5%	91	No	Pref	No	Com

Quotations are approximate. All stocks \$100 par value unless otherwise specified.

\*Cumulative. †Ex-Dividend. A. Listed on London Stock Exchange. B. Listed on Boston Stock Exchange. L. Listed on Louisville, Ky. Stock Exchange. N. Common shares have no par value. X. Ex-rights.

The Securities Department wishes to bring to the attention of members of the organization the following securities which it recommends for investment :—

<i>Bonds</i>	Rate	Interest and Dividend Dates	Price and Interest Market (93 1/4)	Yielding About
*MISS. RIVER POWER CO. First Mortgage due 1951	5	Jan. and July		5.45%
†EASTERN TEXAS ELEC. CO. Gold Mortgage due 1942	5	May and Nov.	91	5.75%
BATON ROUGE ELEC. CO. First Mortgage due 1939	5	Feb. and Aug.	89	6.00%
WHATCOM COUNTY RY. & LT. CO. First Mortgage due 1935	5	May and Nov.	91	6.00%
*PUGET SOUND POWER & LIGHT CO. Gen'l and Ref., due 1941	7 1/2	May and Nov.	105	7.00%
*SAVANNAH ELEC. & POWER CO. First and Refunding, due 1941	7 1/2	Apr. and Oct.	105	7.00%
<i>Notes</i>				
*EASTERN TEXAS ELECTRIC CO. Convertible Notes, due May 1, 1925	7	May and Nov.	101	6.65%
†GALVESTON-HOUSTON ELEC. CO. Gold Notes Series A, due Aug. 1, 1925	7	Feb. and Aug.	101	6.65%
<i>Investment Stocks</i>				
†BLACKSTONE VALLEY GAS & ELEC. CO. Common	10	Mar. 1 qrtly.	71 1/4	7.00%
NORTHERN TEXAS ELEC. CO. Preferred	6	Mar. 1 and Sept. 1	85	7.05%
EASTERN TEXAS ELEC. CO. Cumulative Preferred	6	Jan. and July	83	7.25%
PUGET SOUND POWER & LIGHT CO. Cumulative Preferred	6	Jan. 1 qrtly.	83	7.25%
TAMPA ELEC. CO. Capital	10	Feb. 15 qrtly.	136 1/4	7.35%
MISS. RIVER POWER CO. Cumulative Preferred	6	Jan. 1 qrtly.	Market (81)	7.40%
GALVESTON-HOUSTON ELEC. CO. Cumulative Preferred	6	Mar. 15 and Sept. 15	77	7.80%
COLUMBUS ELEC. & POWER CO. Cumulative 2nd Preferred	7	Jan. 1 qrtly.	88	7.95%
SAVANNAH ELEC. & POWER CO. Debenture	8	Jan. 1 qrtly.	100	8.00%
EL PASO ELEC. CO. Common	10	Mar. 1 qrtly.	123	8.15%

\*Denominations \$100, \$500, \$1000

†Denominations \$500, \$1000

‡Par \$50

Detailed information will be furnished upon request

### Securities Department Offices

147 Milk Street

Boston

New York

120 Broadway

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# STONE & WEBSTER *Journal*

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**A PORTRAIT STUDY BY LAWRENCE TENNEY STEVENS**

# STONE & WEBSTER

## ❧ JOURNAL ❧

1922

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VOL. 31

AUGUST

No. 2

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### EDITORIAL COMMENT

#### “As You Damn Please”

**F**EW of the pleasures of this life are unalloyed. The bitter is mixed up with the sweet. When we dance there is the disagreeable reflection that we must pay the fiddler. We feast and enjoy ourselves to the full, and then look for the bill. That is, that is what sensible people do. But many feast without a thought of the bill. If we counted the cost of everything before we did it, our activities might conceivably be immensely reduced. This occurred to us the other day when we read the following from a letter by Mr. James O. Fagan to the editor of the *Boston Herald*:

Some 15 years ago there was an understanding all over the country that the experiment of public control, perhaps ownership, of so-called public utilities was to be given a thorough try-out on the American railroads. The reformers who were at the back of this movement had certain very important objectives in view, among others the curbing and Christianizing of the management, the recognition and development of the railroad brotherhoods, the boosting of the railroad payroll, the manipulation, for political purposes, of the railroad vote, the efficiency of the service, and last, but not least, the feathering of the political nest of the individuals engaged in the reforms. But for the missing of a political guess here and there

this try-out on the railroads, so far as the carrying out of the program was concerned, was altogether successful. Unfortunately, however, with the passage of time, public interference with the private ownership and management of the railroads (justifiable or otherwise according to individual opinion), has well-nigh obliterated every vestige of the old-time three-cornered human relationship between the employees, the managers and the service, without which industry in general, and railroads in particular, are a public disgrace. This is the real sorrow and the real shame under which railroad problems today are staggering. In terms of human progress and human brotherhood, this is the disastrous result of government interference of a political nature with the private ownership and management of the railroads. These are the results, and this is the kind of work that is giving color to a growing impression in many honest minds that American democracy is a startling illustration of "civilization" destroying itself.

Mr. Fagan begins with the sweet and ends with the bitter. In approaching the end he puts on the ground swell with a vengeance. Mr. Fagan is a railroad employee. In past years he has written a good many articles on railroad problems, which have attracted wide attention on account of their knowledge, their acuteness and their good temper. Today he is thoroughly cynical. Much that he says above bespeaks the counsel of despair. When you speak of civilization and the process of destruction, you cannot go much farther.

Perhaps the situation is not so hopeless as he pictures. Yet there is much to make us think in what he says. Though one may be as blind as a bat, he can see that our railroads are not what they once were. The trains have not got back to the hand brake, but in some other respects they are almost on a par with those of half a century ago. On some roads at least one never knows when he is going to arrive at his destination. Train service grows less frequent with the passage of time. The bright, hustling, accommodating railroad employee grows more and more conspicuous by his absence. In addition to what we have quoted above, Mr. Fagan says this: "Only yesterday I put a question to a train master about the movement of a disabled car. He replied 'Do as you damn please; that is what we are all doing, isn't it?'" We know personally of such cases as this, and think Mr. Fagan must be right in implying that they are quite general. In fact many of us feel that American railroads as a whole are being

run "as you damn please." That certainly is not the way to run a railroad, and one cannot help wondering how it came about and why it is necessary.

Now despite certain of Mr. Fagan's cynicisms, we are bound to assume that the experiment of public control was undertaken with sincere intentions, for we cannot believe that anyone desired to destroy or impair such a magnificent convenience as the American railroad system. Obviously the desire must have been to improve things. And yet witness the result. The owners of the railroads are dissatisfied, the employees are dissatisfied, the public is dissatisfied. The bitter is mixed up with the sweet (if there ever was any sweet) to a horrible extent. Somebody blundered. But who?

It would take a long time to answer that question. We have all blundered. Those who did not know any better blundered because they didn't know any better. Those who did know better blundered because they didn't make more noise. We all blundered because we took too much for granted. Running a railroad, to say nothing of hundreds of railroads, is one of the most difficult tasks of modern civilization.

Yet the people of this country have acted upon the assumption that it was as easy as rolling off a log. The farther we get along in the process of public regulation, the greater the difficulties that beset us. It is something like damming up a stream by throwing up dirt. When you have got it fixed in one place it breaks out in another. Every day some new problem awaits us, each one harder than the last.

We thought we had made some real progress when we created the Railroad Labor Board, but only to find that we had changed the name without changing the thing. The present railroad strike originated as a protest against a mandate of the Railroad Labor Board, which appears merely to have taken over the problems of the railroad executives.

We do not believe that civilization will come to an end if every railroad on earth stops running. But we do believe that the physical comfort and material prosperity of everyone of us will be very greatly diminished. The question is, How far are we prepared to submit to that? Not much longer we think. Necessity is the sternest of teachers. Public regulation has undoubtedly come to stay, and some day as a sheer necessity we shall get it down to a satisfactory working basis.

## The Poet and the Railroad President

**I**N the eighteenth century Blake, in his splendid fragment, "King Edward the Third," makes his bishop say:

Sweet Prince, the arts of peace are great,  
And no less glorious than those of war,  
Perhaps more glorious in the philosophic mind.  
When I sit at my home, a private man,  
My thoughts are on my garden and my fields,  
How to employ the hand that lacketh bread.  
If industry is in my diocese,  
Religion will flourish; each man's heart  
Is cultivated and will bring forth fruit.  
This is my private duty and my pleasure.  
But as I sit in council with my prince,  
My thoughts take in the general good of the whole,  
And England is the land favored by Commerce;  
For Commerce, though the child of Agriculture,  
Fosters his parent, who else must sweat and toil,  
And gain but scanty fare. Then, my dear Lord,  
Be England's trade our care, and we as tradesmen  
Looking to the gain of this our native land.

In 1906 James J. Hill said: "The average man is more interested in speculative theories than in his plain duty toward himself and his neighbor. The average state is filled with visions of its place in the procession of the years, while it overlooks the running account of daily expenses. Problems we have found and trifled with in confusing number and variety, but the problem of the future material condition of our country, of an inventory of its assets and liabilities, of the inevitable demand upon its resources, and the careful adjustment by which alone they may be preserved, has thus far been a subject for little more than a passing thought. National security calls for a just accounting of the business affairs of this great nation."

These two men, so far apart in time, in occupation, in mental characteristics, are discussing one and the same subject, "Plain Duty." And they arrive at one and the same conclusion.

They sum up the whole philosophy of national prosperity. In addition to what is quoted above, Hill says: "The ideal of the prudent, loving, careful head of every family is the true ideal for a nation of rational men." If that is true,

Heaven help us. We have known families as disorganized, as spendthrift, as blind to the future, as this nation is today, but we have never heard them spoken of except in terms of contempt.

As the poet is more inclusive than the railroad president, let us reduce what he says to the lowest terms. What he maintains is: first, peace is more glorious than war; second, industry is, or should be, the handmaid of religion; third, the national resources of the land should be unimpeded in their development; fourth, internal prosperity is checked if foreign markets are not available.

We need not say anything on the first score. The pomp and circumstance of war have vanished. The world is sick to death of war. Ichabod, its glory has departed. We may have to have more of it, but if so, we shall be sure to undertake it with about the same feelings that govern us when we undertake to clean out a sewer.

We hesitate to say anything on the second score, for when you talk about religion you are on delicate ground. Some who think they have eliminated all the non-essentials define religion as a belief in the fatherhood of God and the brotherhood of man. As no one can read the secrets of the heart, we can judge of the tenacity and sincerity of our neighbor's belief in the fatherhood of God only by his exemplification of the brotherhood of man. "If a man say, I love God, and hateth his brother, he is a liar; for he that hateth his brother whom he hath seen, how can he love God whom he hath not seen?" If this is a test of religion, perhaps the less said on this subject the better. If it is true that industry is the servant of religion, then may this nation exclaim today, "Is thy servant a dog that he should do this thing?"

Third, the natural resources of the land should be unimpeded in their development. The resources of the land—what are they? Why, the very things every mother's son of us lives by. Be we vegetarian or carnivorous, every ounce of food we eat comes from the land. So does every shred we put upon our backs, and every roof we put above our heads, and every tool or mechanical appliance of house or factory. Every stroke of industry is a handling of the resources of the land. The very fact that we use "land" as synonymous with "nation" (as when, for example, we talk about "the law of the land"; or when we sing, "This is my own, my native

land") is proof positive of our latent consciousness that the land, the earth, the soil, is (apart from its being a place to stand or walk on) the source not only of every comfort and luxury, but of life itself.

If every man, woman and child is to possess all the comforts possible for human beings, they must all come from the land. Productive industry is concerned with immediately extracting the resources of the land, or with converting them to various uses when once extracted, as when the housewife makes bread with flour which the miller has ground from the wheat which the farmer has raised by cultivating the soil. In our youth we read a story about a little boy who was invited to eat a pudding which it had taken a thousand (or was it a million?) persons to make. It sounded strange to the child, but it was a fact.

There may be some on this earth who have everything they could possibly desire, but the number is too small to be worth counting. Practically everyone could enjoyably utilize infinitely more than he actually possesses, or ever expects to possess. Desire grows by feeding. Every new comfort we acquire enlarges our consciousness and appreciation of comforts that still lie beyond us and which we immediately desire. The more we have the more we want. Yet we can have neither much nor little save as we extract it from the land and by industry fashion it to our myriad uses.

No one desires less rather than more. We are all like the horse-leech's daughters crying, "Give, give." There can be no such thing as general over production; the desire of mankind always has outstripped, and always will, the production of mankind. If when Watt discovered the power of steam anyone had predicted that the annual production of the world would mount to what it is today, many would doubtless have said that the race would perish from satiety. Just the opposite has happened. The increased production not only caused a marvelous increase in population, but created a hundred new desires in every breast for every old one.

How strange, therefore, that anyone should want to impede the development of the natural resources of the land! Yet how thoughtlessly we do just that thing! Instead of each one putting his shoulder to the wheel to increase the number of necessities and comforts, thousands are all the time doing their best to decrease the number and never were more

people so engaged than at the present moment,—the oldest inhabitant cannot recall when the development of the natural resources of the land was more impeded.

P. T. Barnum used to say that the people liked to be humbugged. It almost looks as if he were right. Some persons consciously delude themselves. More are unconsciously deluded because they will not exercise their wits. All these, ignorantly or by preference, believe that by lessening the sum total of the goods in existence each individual will be able to secure a larger supply.

We think we are growing richer, while as a matter of fact we are growing poorer. We mark up the price of things and think it an evidence of increasing wealth. It is just the opposite. When during the war the Government arbitrarily put a price of \$2.20 on wheat, which had been known to sell for less than a dollar, the farmer rejoiced, and so did a great many other very thoughtless persons, who said, "See how much richer this nation is growing!" The fatal fact is that the people as a whole grew poorer. And so in a short time did the farmers; last year they suffered cruel losses because, owing to the fact that the average man had less money in his pocket, the bottom dropped out of the price of wheat.

That is only one illustration, but it will suffice to make clear the whole situation. We need not blame the farmers for demanding and getting a great increase in the price of their wheat. They had to have a higher price if they were going to put their product on the market short of a loss. For they were subjected to a great advance in the cost of production. Nevertheless, there came a smash in the price of wheat, and it is interesting to see how it came about. Briefly, the farmers are all borrowers during the crop raising period and the banks called their loans. The banks exercised great prudence in so doing, yet there was a manifest purpose on their part to get their money back. The farmers had to liquidate.

Now why did the banks do this? The farmers were their long time friends and it was very far from their desire to put them to inconvenience. They did it because they had to. The banks of the country as a whole had extended credit beyond a safe limit. They had to curtail credit in order to avert a general financial collapse. The more they extended credit the higher prices (the cost of living) went. Finally, prices became so high that the consumption of goods fell off heavily—the



people had not the money. The banks in the East had rediscounted heavily for the banks in the farming sections and had to call in their money. That is why wheat dropped so heavily; and what happened in wheat happened in commodities generally. The country, which had fancied that it was growing rich by making commodities cost abnormal figures, in the end found that it had made a tremendous loss.

The natural resources of the land are not fully developed until they go into consumption. Every effort was made on the farm and in the factory to keep the development of these resources unimpeded,—that is, every effort was made by the owners of the farms and factories. But when the development reached the final stage, namely, that of putting the products in the hands of final consumers, it became heavily impeded. And it continues impeded today, despite the drop in general prices that has occurred in the last two years.

Now what was the actual cause of all this? The great rise in the cost of producing everything we consume. That is what has impeded the development of the natural resources of the land. Well then, what occasioned the great rise in the cost of production? The great rise in the price of labor. That and that alone. If anyone thinks he can discover some other factor, he will find that on final analysis it resolves itself into a labor cost.

The whole economic cost of anything and everything that is bought and sold (with the negligible exception of “antiques”) is a labor cost. When the farmer hires farm hands, that is obviously a labor cost. But it is quite as true when he buys fertilizer and farm machinery, for these are simply and wholly the result of a labor cost. The same element comes in when the wheat goes over the railroad to the miller. It comes in, indeed, at every stage until the wheat gets into the mouth of the consumer at the breakfast table. For when the housewife makes the biscuit she is up against the labor cost of making the stove, producing the wood and coal, manufacturing the baking pan, etc.

Before going any farther, let us discuss for a moment the poet's fourth point, namely, internal prosperity is checked if foreign markets are not available. That should be easily seen in the case of this country. The capacity of our farms is more than enough to supply the economic demand of our own people. And that is also true of many of our great manufac-

turing industries. If they are forced to produce no more than the American people consume, a great deal of their capital will lack employment and they will be obliged to reduce their labor force heavily. To take care of their excess production, and thus to keep both capital and labor fully employed, our farmers and manufacturers must have foreign markets. Anything that lessens their hold on such markets checks the internal prosperity of this country.

In the case of foreign trade there is not free play; there is an arbitrary and deterring factor known as "the tariff." The tariff, in short, is a factor supplementary to the cost of production. We may make the labor cost of American products low enough to meet the pocketbooks of foreign consumers, but if what these consumers produce is shut out from this country by a tariff wall they will not be able to buy nearly so much of us as we shall like to have them. We make this point parenthetically, however. The fundamental fact in foreign trade is that of labor cost.

It is the labor cost that is today impeding the development of the natural resources of the land. It is the labor cost that is making most persons consume less of the comforts and luxuries than formerly. The labor cost, in short, is reducing the American standard of living. The nation is rich in natural resources, but poor in purchasing power. This is a condition and not a theory. It is not a thing that can be argued away. It is something that every one can see with his own eyes, and which has its reflex in his own pocketbook.

It must be remembered that labor as well as capital is dependent on credit. Credit is the means by which both are, in the main, kept at work. It is needless to say how this operates in the case of capital. Many, however, forget the process in connection with labor. Labor receives the larger part of the product of its effort; a smaller part goes to pay the interest on the capital that builds the mills and keeps them in running condition, pays for the raw materials, the transportation charges, the selling of the goods, etc.

When labor starts to make goods it cannot wait until the goods are produced and actually sold, for that would take months, and labor must live in the meantime. It is paid in advance on the instalment plan, in the form of wages. Wages are representative of labor's share of the product, and labor gets its share long before the owners of the plants in

which it works get theirs. The owners provide labor with all the mechanical facilities for doing the work, which it cannot, or at least does not, provide for itself. Furthermore, as the owners pay labor for its share of the product long in advance of the marketing, they have to borrow the money (that is, get it on credit). Thus it will be seen that a wide curtailment of credit, such as has taken place in the last year or two, hits labor as hard as it does capital.

The cost of production has outstripped the credit capacity of the country, and the cost of production is wholly a labor cost. So in the last analysis labor is responsible for the recent and present impeding of the development of the natural resources of the land.

Instead of doing what it can to rectify the situation in the only way it is possible to rectify it, namely, by reducing the labor cost of producing commodities, organized labor is fighting vigorously to prevent such reduction. By strikes it is reducing the purchasing power of the nation, thus making it all the harder to market the products of labor.

What folly! Labor thinks that by creating a present evil it can procure a future good. But there can be no sense in making a heavy sacrifice for a future good unless the good is going to be permanent. Yet how can permanent good result from putting the purchasing power of the nation in inverse ratio to the cost of production! How that works out may easily be seen by anyone who will scan his expense account of recent years. The average man may truthfully say that even if his receipts are larger than they were six or seven years ago, his standard of living is lower.

A minority have not only got more but have raised their standard of living materially, but it has been at the expense of the majority. The country has suffered cruelly, is now suffering and must continue to suffer so long as this disparity continues. Organized labor has lost its sense of proportion. It is not conceivable that the individuals who constitute organized labor have as a whole any desire to diminish the prosperity of the whole people, but that is what their present course amounts to. They are fostering a special class, comparable to the old aristocracy of past centuries, which, though relatively small in numbers, shaped the destinies of nations, and too frequently for the worse.

James J. Hill's statement that "the average man is more

interested in speculative theories than in his plain duty toward himself and his neighbor" comes infinitely nearer the truth than in 1906. The world has given itself over to fantastic speculation. Meanwhile the universe is governed by the same old laws which have always governed it, and which no speculation of man can ever change in the slightest degree. The world, and not least of all America, is worshipping speculation as the Hindoos worshipped the idol of Juggernaut, before whose car they prostrated themselves and were crushed to death.

There was once a prophet who went into the desert and stood on a mountain. And there came a mighty wind that rent the mountain; then there came an earthquake; and then there came a fire. But the Lord was in neither the wind nor the earthquake, nor the fire. And then there came a still small voice.

The wind, the earthquake and the fire are devastating the earth today. Possibly the still small voice of reason will be heard before long. "The simple believeth every word; but the prudent man looketh well to his going."

## Going Concern Value In Rate Cases

BY W. H. BLOOD, JR.

**B**EFORE cities were built streets were unknown. With the automobile came a new thing and a new word, garage. The airship occasioned the hangar. As civilization progresses we coin new words and phrases to describe the objects with which we deal.

The expression "going concern value" arose out of necessity. Some term was required to describe a thing which was known to exist but which had never been named. The choice of the name was perhaps not altogether wise, but it called attention to the reality of the thing, and the thing which the name stood for at once claimed the attention of the courts and later of the public service commissions.

From the earliest times, a private business that was bought and sold included in its value an element called "good-will,"—good-will being described as what the purchaser was willing to pay for the established business over and above what the physical property was worth. It is based upon the theory, as expressed by Lord Eldon in one of the early English cases, that the old customers would probably resort to the old places. Even this statement, simple as it seems, carries with it no means of fixing the amount, and the establishment of this value is not ascertainable by any law or formula. It is the result of an estimate, presumably by a man of experience, and this judgment value will naturally be of different amounts when fixed by different men because it is based on opinions, and opinions, of course, differ.

It frequently happens, with private property, that the good-will value, due to the earning power brought about by efficient management, is of more importance than the value of the physical property. Many maintain that this theory cannot be applied to a public utility operated as a monopoly, for the reason that the old customers have no choice in the matter of whom they shall patronize; that the customers take the service of the utility or go without because it is not obtainable elsewhere; hence, good-will, it is contended, does not enter.

This view has been taken by many courts and commissions both in sale and in rate cases where public utilities have been under consideration, hence we have come to disregard good-will when attempting to obtain the value or rate base of

a public utility and have given more attention to going concern value as a more comprehensive term. In some decisions the wording implies that good-will value has been used in the same sense as going concern value. As a matter of fact the terms are similar, yet most of the courts and commissions do not add anything for good-will value, but they do include going concern value as an important element of value when obtaining "fair value" on which to fix rates.

The expressions "going concern value" and "going value" are used interchangeably; in fact, they are generally regarded as synonymous, but they are not well chosen in connection with the establishment of a "rate base" or "fair value," as the courts and commissions commonly call it. When an engineer makes an appraisal of a property all his estimates are based upon "cost" to reproduce, regardless of whether he is considering labor, materials, interest during construction, or taxes. It hardly seems consistent to include with these "costs" another item that is headed "value." While "cost" and "value" may be the same, in some cases, this is not necessarily so. The accountant in taking from the company's books items that go to make up "historical cost" or "original cost" has no right to add to these items a different kind of item called going "value." To have these appraisals command the respect that they deserve they should, at least, be consistent. For the same reason that one cannot add apples and pears so one should not try to add "costs" and "values." What we are really trying to find out and what we wish to add to the cost to reproduce the physical property is the cost to reproduce the business of the company; in other words the "development cost." Over and above the cost of the "bare bones" of the physical plant with all its machinery, appliances and apparatus ready for operation is the cost of getting the property running on an economical basis and of getting an income sufficient to give a fair return on the value of the investment. The courts and most of the commissions now say that this is a legitimate item of cost and that it must be considered in fixing value.

In the ascertainment of going concern value, it has long been recognized that one way to measure it is to find out what the early losses less than a fair return have been. Applying this method to the ascertainment of "going concern value" led to absurd conclusions and, for a time, almost

caused "going concern value" to be a joke. On its face, it meant that the company that showed the greatest early losses was of the greatest value. This apparently contradictory statement came about almost entirely by the unfortunate use of the expression "going concern value." If we use the term "development cost" for our name, then the inclusion of this cost, which is the reasonable cost of building up a paying business, with all that this implies, is logical and is an element that must be included, both legally and as a matter of justice, when "fair value" is established. It is sometimes said that "going concern value" is a broader term than "development cost." At first glance this might seem to be so; but if one will stop to consider what "development cost" means and will include all the items that go to make up "development cost," then the two terms may be used interchangeably. One must also remember that a "profitable business" not only calls for a "fair return" on a "fair value" but that it also calls for earnings adequate to build up a replacement or retirement reserve sufficient to maintain the integrity of the investment at all times.

No one today questions the propriety of adding to the cost of the physical structure the cost of the use of capital, otherwise known as "interest during construction." The exact length of time it may take to build a plant and the net rate of interest may be subject to difference of opinions, but the courts and commissions all admit that interest during construction is as much an element of cost as are labor and materials. Interest during construction stops, presumably, as soon as the plant is put into operation. But following this time, there is always a period when the net earnings are insufficient to pay a fair return on the value of the property; this development period is simply a continuation of the construction period. In the construction period no interest was earned by the property. In the development period perhaps some interest was earned, but ordinarily not enough to carry the project. It necessarily follows that if interest during construction is a proper charge to capital, then the amount below a fair return during the development period is also a proper charge to capital. Likewise, the amount by which the company fails, because of inadequate earnings, to make provision for replacements should also be included and capitalized as forming part of the cost of development. In this

discussion "fair return" is meant to include not only a just rate of interest but also enough to maintain the property adequately.

Before public regulation was in force, utilities as a rule expected to make up their early losses by the distribution of large dividends after the plant had become well established. In some cases this was accomplished and, in the long run, the investor was able to average up so as to receive a fair return for the whole period. Since regulation has come into effect, where the return upon the investment is limited, this method of recouping early losses is not possible, and the only practicable way for the investor to get back the money expended in developing the business is to capitalize these early losses and to consider them as an investment upon which, under regulation, he is entitled to a fair return.

The question may properly be asked, what period shall we use in which to consider deficits? Some one answers two or three years; another says five years; still another says it may take ten years to put the company on its feet. If the deficit below a fair return is to be considered at all, it should be considered as long as the operation of the property results in a deficit, provided (and this is important) that good judgment has been exercised in building the property and that the property has been operated honestly and efficiently. It is easy to spoil a good case by stretching it to absurd limits. Too many properties have been built before their construction was warranted and to go too far back into the ancient history of the company indicates lack of judgment. If a 20,000 kilowatt lighting plant were built down on the end of Cape Cod, it probably never could be made to pay. In such a case the losses should be borne by the investors because of their bad judgment. It would not be fair to saddle these losses in the form of rates on the 4,246 innocent people of Provincetown who wished to use electric light. Reason must be applied in this matter as in all matters where the exercise of judgment is called for. It should be remembered, however, that development cost of extensions or additions to most of our properties in growing cities where we try to supply the public demand recurs in some form or another long after the original, the nucleus plant is operating profitably. Take a street railway, for instance. Each new line that is run into an undeveloped territory is, in fact, a new enterprise. It does not



pay at first and development cost goes on until it does yield a fair return. The age of the original property has no bearing on the determination of the development cost of these extensions.

Before me, at the moment, lie 53 typical definitions of going value taken from court and commission decisions and from testimony or addresses of engineers of standing. Practically all of them describe more or less clearly "cost of development." With many of the leading court and commission decisions to guide us, it would seem that development cost includes all the expenditures required by the company to secure the necessary customers and a business that yields a fair return on the investment. This covers the period from the date the physical plant was completed up to the time that the company was able to produce an economically operated property doing a business that gives it a fair return on the value of the property. If a company is not yet on a paying basis, it represents actual expenditures that have been made to produce its present business, provided that the original plant was reasonably warranted and that it has been operated with judgment and efficiency.

The fact that "going value," i. e., "cost of development," is hard to determine in dollars is no indication that it does not exist. Our inability to fix the exact amount is due largely to inadequate accounting and to past lack of appreciation that these costs must be recouped. While most of the courts and commissions now recognize "going value," none of them has settled upon any method as to its exact determination, and there is some difference of opinion as to what it should include. Judgment must still be exercised in its determination. The following are some of the matters that should be taken into consideration in determining "development cost.":

1. The cost of securing customers and working up a profitable business;
2. The cost of getting the physical property operating on an economical basis;
3. The deficits due to operation;
4. The cost of superseded machinery, apparatus, etc., discarded before it is possible to amortize its cost;
5. Other matters of a similar nature.

While it is true that some of these items may be and some-

times are charged to operating expenses, they are more properly a capital charge and, in a rate case at least, should be considered as part of the cost of building up or establishing the business. There is no hard and fast line of demarcation between the above and they frequently overlap one another. The following paragraphs give typical examples of the five items enumerated above as they apply to a street railway property:

1. Frequently car lines are built into territories where the population will not support them. The utility must do this to "serve the public." People also have to be educated to ride. If there are not enough cars to suit them they will walk. The company therefore is obliged to run more cars than the population warrants in order to create the "riding habit." This is in the nature of advertising or "demonstrating" and the cost thus incurred in working up the business is a proper charge to "development cost."

2. A new plant never runs as well as one that has been going a while. The company may operate too many boilers instead of crowding a smaller number harder. It may run too many generators, all under-loaded. It may not have its car schedules properly adjusted; that is, it may start too many cars at exactly the same time, while if they were sandwiched, the peak load on the station would be less. The motormen may not at first pay proper attention to "coasting" their cars to give minimum current consumption. All these failures to operate at highest efficiency cost the company real money and are thus legitimate charges to cost of development. The above are simply illustrations, but they indicate the type of costs of securing economical operation.

3. Deficits due to operation, especially in the early years are generally recognized as an element in the cost of development. The former items, 1 and 2, may or may not be included in the deficit. They may be in part the cause of these deficits. The deficits may be and frequently are greater than the sum of these two items. Deficits may also be brought about by too low a rate of fare, abuse of transfers, too long a haul, and by various other causes.

4. Changes from horse car to cable, from cable to electric, from open cars to semi-convertible, from heavy double-truck cars to single-truck safety cars are expensive. The investment represented by equipment abandoned or replaced

in this manner before it is worn out is a part of the cost of developing the property and, if unamortized, is a proper charge against capital.

5. There are many other similar items which must be considered when obtaining cost of developing the property. For example, the company may build a crossing at grade. Later it is ordered to go under the railroad and to pay for part of the cost of the under-pass. The city may re-establish the grade of certain streets and the company is obliged to make its tracks conform. This is a frequent occurrence and does not increase the earning power of the company, but it does represent large expenditures of cash. The original expenditures cannot be included in an appraisal of the existing property, because in cases as above mentioned they no longer exist. The original expenditures are lost unless they are included in the "cost of development." The smaller the company, as a rule, the larger proportionately are these amounts. In a large company, however, which results as a consolidation of many small companies, where there has been a great deal of abandonment of property and apparatus which proved to be inadequate or too small to work well in a consolidated system, one would find this item unusually large.

While it may be taken for granted that development costs should be capitalized, there are at least two other methods of taking care of these costs which should be considered. The rates of fare from the beginning, it could be assumed, might be made high enough to make the property self-supporting and cover all the development costs. It is quite obvious that in most cases, if not all, such rates would defeat the very purpose sought. Suppose a new trolley line is built to give service to a new section of the city. To break even at the start, assuming that all the people in this section of the city rode, might perhaps require a fare of 25 cents as against six or eight cents in the rest of the city. With a fare of 25 cents no one would ride. Such a method of caring for development costs is obviously impossible. It might be said that the investor, that is, the owner of the property, should stand these losses. Investors put their money into enterprises with the expectation of receiving a fair return, which, under regulation, they are entitled to if the property can be made to earn it. The public cannot expect, as a legal proposition, that the investor should receive a return on only a part of his capital,

and as a business proposition no one could be found who would knowingly make such an investment. It therefore appears that the only way to take care of the cost of developing a business is to treat these expenditures in exactly the same manner that interest during construction is treated and to add them to capital. If this is not done, then the public has confiscated private capital for its own use, and under the Constitution of the United States this is not permitted.

In many cases the lower courts, and even the Supreme Court, have said that this development cost or going value, as they generally term it, is something in excess of, something that should be added to, the cost of reproduction. One early decision will suffice to show this.

In the case of the National Water Works Company vs. Kansas City, Justice Brewer of the Supreme Court said:

“The fact that it is a system in operation, not only with a capacity to supply the city, but actually supplying many buildings in the city,—not only with a capacity to earn, but actually earning,—makes it true that ‘the fair and equitable value’ is something in excess of the cost of reproduction. . . . It should pay therefore, not merely the value of a system which might be made to earn, but that of a system which does earn.”

To be sure, this was a purchase under condemnation, but in more recent cases it has been shown that the principle is the same whether value is to be determined for a sale or for a rate case. Justice Brewer laid down no rules for the determination of development cost, but he stated very definitely in the case above referred to, that it is real and must be considered. The courts all along have said that it is an amount hard to ascertain, nevertheless, they have said that it must be determined as well as it possibly can be.

This matter is clearly set forth by the Court of Appeals of the State of New York in *People ex rel. Kings County Lighting Company vs. Willcox*, as follows:

“The difficulty of determining the ‘going value’ will not justify the disregarding of it. Rate making is difficult. But that will not justify confiscation. The difficulty, however, will lessen, as it does in most cases, when we cease to think about the subject vaguely. What then is ‘going value’ and how is it to be appraised?”

"It takes time to put a new enterprise of any magnitude on its feet, after the construction work has been finished. Mistakes of construction have to be corrected. Substitutions have to be made. Economies have to be studied. Experiments have to be made which sometimes turn out to be useless. An organization has to be perfected. Business has to be solicited and advertised for. In the case of a gas company gratuitous work has to be done, such as selling appliances at less than a fair profit and demonstrating new devices to induce consumption of gas and to educate the public to the maximum point of consumption. None of these things is reflected in the value of the physical property, unless, of course, exchange value be taken, which is not admissible in a rate case. The company starts out with the 'bare bones' of the plant, to borrow Mr. Justice Lurton's phrase in the Omaha Water Works case, *supra*. By the expenditure of time, labor and money it co-ordinates those bones into an efficient working organism, and acquires a paying business. The proper and reasonable cost of doing that, whether included in operating expenses or not, is as much a part of the investment of the company as the cost of the physical property."

The two quotations given above, if taken together, present an excellent picture of the various items which enter into development costs, but still they present no method of actually determining these costs. Perhaps it is impossible to work out any formula or to set down any rules for its determination. Some courts and commissions have gone so far as to state that it must be determined by the judgment of experienced men, while others generalize and say "it must be considered."

In the same case of Kings County Lighting Company vs. Willcox, the court brought out further that "going value" must be appraised just as the physical property must be appraised. The best evidence obtainable must be used, and where the records of the company are inadequate, it is necessary to rely on opinion evidence:

"It may be conceded that going value has no existence apart from tangible property and that commercially there is but one value, that of the property as a whole,

but as the rate cannot be made to depend upon the exchange value, which would in turn depend upon the rate, it would seem to be necessary to appraise the physical property and the going value separately and, of course, that is the case if the cost of reproduction rule be adopted. . . .

"It remains to consider how 'going value' is to be appraised. That represents a question of fact, the determination of which is primarily within the province of the rate-making body. . . .

"Obviously, the most satisfactory method is to show the actual experience of the company, the original investment, its earnings from the start, the time actually required and expenses incurred in building up the business, all expenditures not reflected by the present condition of the physical property, the extent to which bad management or other causes prevented or depleted earnings, and any other facts bearing on the question, keeping in mind that the ultimate fact to be determined is not the amount of the expenditures, but the deficiency in the fair return to the investors due to the causes under consideration. The business in this case was 20 years old, the books of the old company were not available, and it is of course problematical whether, if produced, they would have shown the necessary facts. The question, therefore, had to be determined, as all questions of fact have to be, by the best evidence available. Here, I may repeat that mere difficulty in the proof would not justify a confiscatory rate. The value of the physical property was shown by opinion evidence as to the cost of reproduction. The same kind of evidence was given by two witnesses for the relator as to the cost of building up the business to its present state. . . . With nothing opposed to those facts and the opinion evidence it was not justified in ignoring the evidence of 'going value' or of merely attaching some inappreciable importance to it." (210 N. Y. 492; 104 N. E. 911).

In the case of *Des Moines Water Company vs. City of Des Moines*, the Federal Court said as follows:

"The master has found and fixed a valuation upon this property, as a going concern, as distinguished from

the naked plant. As to this both reason and authorities sustain him. Everything of a business character is thus valued. The peanut or news-stand on the street corner, the trunk line railroads and the street railroad systems, the city and the village stores, the newspapers, the carriages for hire in the cities, dairies, bus lines, and every conceivable business proposition, has a greater value when the business is established, and it is set going, over and above what such value would be when but ready for operation. A telephone system may have its wires, but before the business can be profitable it must have patrons. It takes effort and money to get patrons. While obtaining patrons, the capital stock is earning but little or nothing. The street car system may have laid its rails and built its power plant, and have bought its cars, but it does not have the value that it afterwards will have when its business has been adjusted and the people have adjusted their business and their conveniences to work in harmony with the system thus established.

"It is not material whether we call it 'good-will', or the 'value of a going concern', but there is an intangible value there, and the owner has the right to have it determined on such increased valuation.

"Now that it is a going concern, it is entitled to have these values considered in arriving at the true valuation of the plant. Such reasoning is endorsed by courts, both national and state Supreme Courts, and such conclusions are the result of sound reasoning."

Some of the commissions have tried to make out that development costs, while applicable to sale and condemnation cases, are not to be considered in rate cases. The Appellate Division of the Supreme Court of New York, however, overruled the public service commission of that state in *People ex rel. Kings County Lighting Company vs. Willcox*, Justice Clarke, who wrote the opinion, stating the position of the court as follows:

"I am unable to perceive a logical difference between allowing 'going value' in the valuation of a plant when it is to be taken entirely by the public and allowing the same element when valuing the same plant for rate-

making purposes. In each case the thing to be done is the fair appraisement of present value. What difference in principle can there be because in one instance all is taken for the use of the public and in the other the public limits the earnings? In the case at bar the commission says it 'disallowed this claim in determining fair value, . . . but did consider it in fixing the rate of return.' If so, there is no proof of that fact in the record."

The Wisconsin Commission from its earliest decisions, has recognized development costs as an element of value and has referred to them as "actual and necessary," while some of the newer commissions, and particularly those of the political type, would have us believe that going concern value is theoretical and non-existent.

In the case of the Superior Water, Light and Power Company, the Wisconsin Commission said, in part, as follows:

"These facts indicate quite clearly that the respondent has not only not earned enough in the past to wipe out the original cost to it of developing its business, but that even under present conditions it would cost considerable sums to reproduce its businesses as they now stand. Development costs of this kind are actual and necessary. Without them the services rendered the public could not have been performed. They belong among those classes of costs which, on the ground of equity as well as because of public policy, should ordinarily receive consideration in fixing the amounts upon which, under normal conditions, public utilities are entitled to reasonable returns for interest and profits."

This same commission in the Beloit Water, Gas & Electric Company case has stated its views on this subject in even clearer language than the above saying:

"The costs of developing the business of a public utility are as much a part of the investment in the business as the physical structure."

It is also interesting to note that the Supreme Court of Wisconsin has always sustained the commission in its findings in regard to "going value" or "development cost."

References of like character could be quoted by the dozen but it seems hardly necessary when so many of the courts and



commissions are in agreement on this subject. To summarize, however, the following quotations from the decisions of the leading public service commissions may be enlightening:

The Alabama Public Service Commission says:

" . . . it is perfectly clear that anyone . . . would give more for a plant that was a going concern with an attached business and developed earning power, and an efficient organization. It is worth more."

The Arizona Corporation Commission says:

"We have not disregarded this item."

The California Railroad Commission says:

"Previous decisions of this commission have recognized the necessity of compensating for such early losses, and the existence of a going value is recognized by both parties to the complaint in the present case."

"The law and courts and the authorities without exception hold that going concern or going concern value must be recognized and considered as an element in condemnation cases."

The Colorado Public Utilities Commission says:

"Notwithstanding the facts hereinabove set forth, the commission will, in connection with defendant's electric property, make due allowance for the fact that it is a going concern, with an established business and in successful operation."

The District of Columbia Public Utilities Commission says:

" . . . after careful consideration, concludes that it is equitable to allow for development cost as an intangible item to be considered in connection with the cost of reproduction element of fair value."

The Georgia Railroad Commission says:

"In so far as 'going value' includes such elements as actual expense of attaching business, we believe that it should be recognized in the earlier or beginning rates of a public service corporation and for a sufficient period to reimburse the company for such reasonable expenditures."

The Illinois Public Utilities Commission says:

" . . . viewed in this light, 'going value' ceases to be indefinite and formidable; but instead reduces itself to a remarkable degree of concreteness. However conscientiously a scientific solution of the intangible elements may be striven for, it is quite apparent that, at the present stage of progress in economic theory applied to rate-making, an expression of 'going value' is to be arrived at, not by utilizing mathematical formulas, but by considering judicially all relevant and pertinent facts established in any case under consideration."

The Indiana Public Service Commission says:

"That 'going value' as an essential element in determining the value of a public utility is no longer an open question."

The Kansas Public Utilities Commission says:

"While the courts and commissions are far from being harmonious upon the question of whether or not 'going value' should be included in the appraisalment of a public utility for rate-making purposes, it would appear that the great weight of authority, as well as the best considered cases, require that some addition be made to the physical, tangible value for intangible value as a 'going concern.'"

The Maine Public Utilities Commission says:

"Our theory is that an allowance for going value should be made only where the owners have not already received fair compensation for the use of their capital during a reasonable development period."

The Maryland Public Service Commission says:

"In the case of going value, sometimes referred to as development cost or cost of establishing the business, the law is clear that whenever the fair value of the property of a public utility for rate-making purposes is to be ascertained, some allowance must be made the owners on account of the fact that their business is an established one to a greater or less extent and that such fact gives to the property an inherent added value which cannot fairly be disregarded."

The Michigan Railroad Commission says:

"It will be conceded that, purely as a matter of value, the live, going exchange is worth at least as much more than the dormant one as it would cost to put the dormant exchange into the active condition. It would be equally justifiable to omit, from the value of the property, the cost of erecting the buildings and assembling and constructing the exchange as to omit the cost of building a business incidental to the plant."

The Missouri Public Service Commission says:

"This commission has been called upon to consider 'going value' and intangibles in nearly all the valuation cases presented, and we have generally declined to set out a separate and distinct amount as representing intangible or going value, but have attempted to find a fair present value, upon consideration of all relevant matters."

The New Hampshire Public Service Commission says:

"That a proper allowance must be given to the so-called going concern element in placing a value upon the property of any public service corporation has been held repeatedly, and we believe is required by consideration of justice as well as by authority."

The New Jersey Public Utility Commission says:

"The 'going concern value' will then be largely represented by the cost of developing the business as distinct from the cost of securing the physical structure. This going concern value may include the cost of soliciting business, cost of advertising, cost of inducing consumers to take service, cost of exhibiting appliances, cost of occasional free installations, and also the dearth of adequate returns during the early developmental years of the company. Depreciation unearned in this period may also sometimes be included in 'going concern value.' Indeed, the term 'going concern value' or 'going value' may be employed to cover the total value of a company's property over and above the structural value."

The New York Public Service Commissions said:

"Going value, as recognized by the laws of this state, seems to be limited to expenses incurred in the earlier years of the life of a utility in building up its business, and not recovered from the public in the way of earnings."

The Oregon Public Service Commission says:

"The question of the reasonableness of the allowance is of prime importance and, under its present enlightenment, the commission is of the opinion that the determination of a proper allowance for development cost must rest upon the judgment and discretion of the determining body after a full consideration of the history of the physical plant of the utility, and of its rates, results of operations, operating organization, and attached business; the nature and size of the territory served, growth of population, and kind, number, and general circumstances of its patrons; the general commercial conditions during the life of the plant and during the ownership by the present investors; the terms of and conditions under which transfers of ownership have occurred, the financial history of the plant; the progress of the art, and general attitude of the public toward its utility product; the competitive conditions, if any, and all other matters and things which, in the particular instance, may have a bearing upon the subject."

The Utah Public Utilities Commission says:

"We are clearly of the opinion that no general rule can be laid down for the determining of an allowance of this character. It is not a mere matter of formula, and must be made only upon the best judgment of the commission after consideration of all relevant facts."

The Washington Public Service Commission says:

"In the rate-making value, the item of going value is replaced by the item of development cost. It is clear that while the item of going value would be of direct interest to those having to do with the sale or purchase or financing of the company, it is not an item necessarily of interest to those having to do with the determination of the proper selling price of gas . . . The item of development cost is allowed by the commission."

The Wisconsin Railroad Commission says:

"Investigations of the facts involved make it quite obvious that justice between the investors on the one hand and the consumers on the other requires that in valuing public utilities, consideration should be given to the amounts expended by the former in building up the business of such plants. This is especially true when the earnings of a utility have not been sufficient to meet reasonable expenditures for development of the business and besides this cover operating expenses, depreciation and reasonable returns on the investment."

From the above quotations it is apparent that most of the public service commissions, and certainly those which are regarded as the progressive and enlightened ones, do recognize "development cost" as an element that must be taken into consideration in the determination of value for rate making purposes.

In conclusion, a decision of the United States Supreme Court in the case of *Des Moines Gas Company vs. City of Des Moines* will serve to sum up the whole matter in the fewest words possible:

"This element of value (going value) is a property right, and should be considered in determining the value of the property on which the owner has the right to make a fair return when the same is privately owned, although dedicated to public use."

## The Beginning of a Career

BY THE EDITOR

**M**ATERIAL things are of little worth if they fail to minister to beauty, for beauty is one of the means by which the weary weight of this unintelligible world is lightened. Most of us may truthfully say:

“The fretful stir  
Unprofitable, and the fever of the world  
Have hung upon the beatings of my heart.”

But man shall not live by bread alone, but by every word of God—by every manifestation of beauty, in nature, in nobility of character, in the creations of the imagination. Each of us has a haunting assurance of this fact. The world however, is too much with us; getting and spending, we lay waste our powers.

That is why, for the moment, I am allowing myself to forget all about engineering and construction, the operation and financing of public utilities, the subtleties and strenuities of public regulation. My mood is similar to that of the admirable woman who penned the familiar line, “I love to steal an hour away.” My stolen hour I propose to pass in the company of a young man who, if he fulfills the promise of his youth, is bound to exert a powerful influence on American art.

Mr. Lawrence T. Stevens is the nephew of a member of the Stone & Webster organization, and by not a few other members his career as a sculptor is being followed with intense interest. Recently he has captured the *Prix de Rome* and gained a fellowship at the American Academy at Rome, where he will pursue his studies during the next three years. It seems not only to me, but to others possessing a much better critical judgment, that his work possesses highly exceptional qualities. I am sure that the illustrations that accompany these brief remarks will make that clear to the most casual observer.

Let me call attention to Plate III. The figures there depicted were executed when this young man was 16 years of age and before he had had any instruction in working in clay. Admitting their youthful crudity, they are nevertheless alive—they are not inert. I am of the opinion that this characteristic is in the sculptor what the color sense is in the painter, the thing without which the artist is doomed to mediocrity.



PLATE I  
MUSIC—THE WINNER OF THE 1922 *Prix de Rome*



PLATE II  
PLAY OF DRAPERY



PLATE II  
CAREFULNESS IN DETAILS



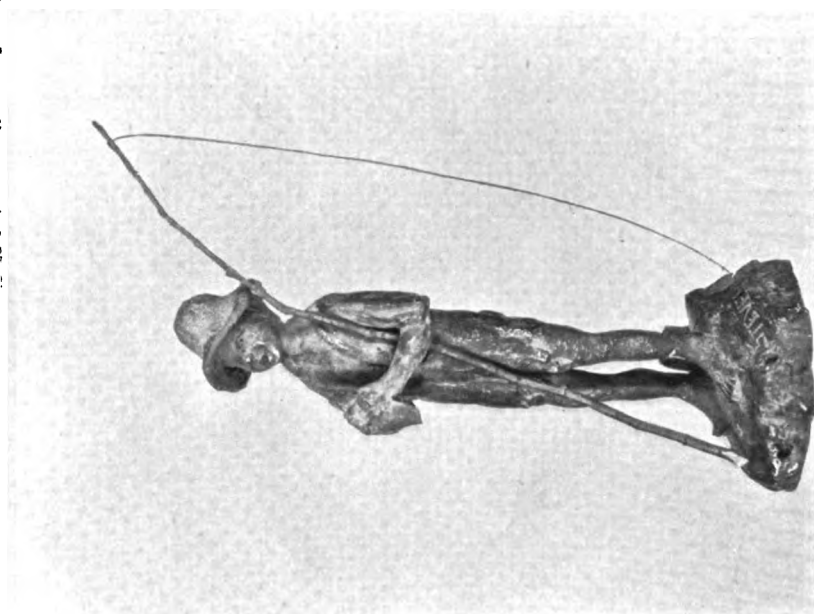


PLATE III  
THE FISHER BOY

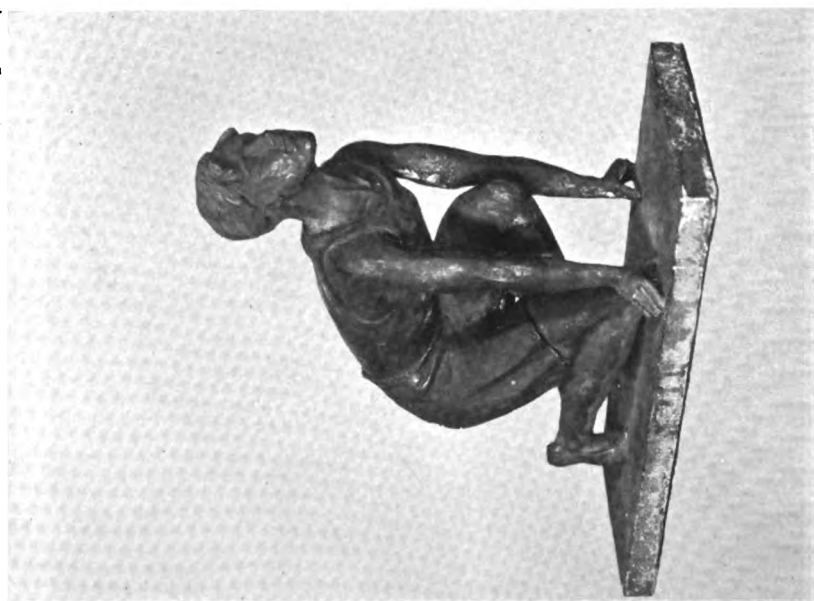


PLATE III  
THE RUNNER

But while these early figures are intensely vitalized—particularly that of the young man about to spring—they possess a quality that allies them with the classic. For the charm of the Greeks is that no matter how strenuous or heroic the situations they are depicting, they always leave you with a feeling of tranquillity. As Winckelmann has so finely said: “As the depths of the sea remain always at rest, however the surface may be agitated, so the expression in the figures of the Greeks reveals in the midst of passion a great and steadfast soul.”

Before saying a word or two about the group which gained for Mr. Stevens the *Prix de Rome*, let me point out a third characteristic of his work. He seems instinctively to have grasped the fact that the keynote of art is beauty. The Greeks frowned on representations of ugliness and triviality. I take it that the aim of the Greek artists was to teach man to know himself, and at his best. They depicted him (and all else with which they related him in their sculpture) in the noblest, most graceful, most harmonious terms, eliminating all that was meretricious, ephemeral, and calculated to excite painful or revolting emotions.

To stir, to tranquillize, to awaken the sense of beauty, is the purpose of great art. And it is because the young man in whose company I am spending this hour stolen from bread and butter affairs seems to have been born with this ability that those who have studied his early work have great faith in his future. His latest work indicates that his technique has already reached a high point of development. With maturing thought and feeling, with a growing knowledge and appreciation of the best that has been said and done, he should put all lovers of the beautiful heavily in his debt.

Indeed, he has already accomplished this with the few who have had the opportunity to study his work. For his statue of “Music” (which gained him the *Prix de Rome*) is a notable production. Here we have a youth pouring forth his love in song to a maiden; but the underlying suggestion is that of the creative musician and his rapt and inarticulate audience. The conception is poetic, the modeling exquisite, and the effect in the highest degree elevating.

And one should note the sculptor’s fidelity to his art. It will be seen that there has been not the slightest diminution of care and thoroughness in the rear details. I may be wrong,



PLATE IV  
TEMPEST

The composition of one evening last winter



PLATE V  
AN ATHLETE  
Executed in the winter of 1921



PLATE VI

A GUERNSEY BULL

Executed in the summer of 1921, at the Tiffany Foundation, Long Island

but personally I am of the opinion that the back of the maiden in this group is one of the finest effects in modeling ever achieved in American sculpture.

Lawrence Tenney Stevens was born in Brighton, Mass., July 16, 1896. On graduating from the high school, he was given a scholarship at the art school of the Boston Museum of Fine Arts, where he remained until the war, when he was commissioned as second lieutenant in the 4th Field Artillery (Regulars), being later advanced to first lieutenant. After the war, he went to the Mexican oil fields to earn money to prosecute his studies. Eventually, he obtained once more a scholarship at the Museum School. There he remained until he won the *Prix de Rome*, incidentally working evenings at the Boston Normal Art School to perfect his drawing.

Few sculptors have served a more laborous apprenticeship. Few persons have more effectually testified to the fact that where there is the will there is the way. He at least has shown us the truth of Dr. Johnson's statement that few things are impossible to diligence and skill.

In concluding, I may as well disclose my real motive in writing this article. As a matter of fact, I am trying to beat the devil around a stump. Mr. Stevens' accomplishment is something that personally I take great pleasure in contemplating, but on its face it is not within the specific scope of this publication. It contains implications, however, that should arrest the attention of all engaged in practical affairs. For it points unmistakably to the fact that we are creating conditions in this country that will sooner or later be reflected in more sightly and harmonious public works. We may hope that eventually our great utilitarian activities will be garbed as artistically as they are abroad.

To combine seemliness with utility is a crying need of this nation. The architectural standards employed in the construction of mills and factories and bridges and power stations are not such as to flatter the pride of the American people. Frankly, I am using Mr. Stevens to point a moral, as well as to adorn a tale. He is an index of what I believe to be a national aspiration for more correct ornamentation in our daily lives. A fountain rises no higher than its source. The appearance of our cities, our towns and our countryside conforms to the instincts of those who make them what they are. Mr. Stevens is an exponent of pure beauty, and his work

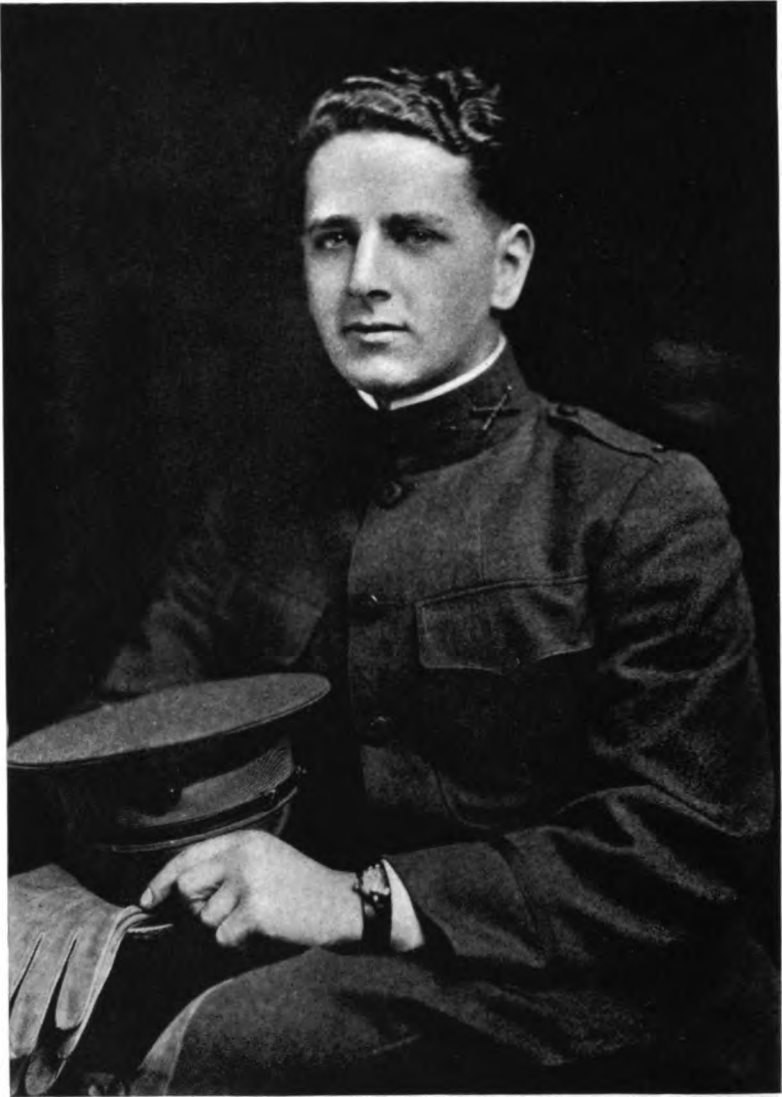


PLATE VII  
LAWRENCE TENNEY STEVENS

is not such as we generally associate with utilitarian affairs. My contention is, however, that a growing appreciation of such work as his signifies a growing appreciation of the beautiful in every other line of work. It is an outward and visible sign of a finer inward grace on the part of the American people. And this refining of the fundamental sense of the beautiful should eventuate—and before long—in more graceful public and private structures, which shall be none the less efficient, while even more economical, because of their increased seemliness.



## A Summer Frolic

BY L. S. COWLES

ON Thursday, June 29, I was ordered to proceed that night to the soft coal mining district of West Virginia for the purpose of making an appraisal of a mining town on Paint Creek. Coal mine and West Virginia did not sound at all attractive, particularly with the memory of the Herrin tragedy still fresh.

I left Boston for New York on the "midnight" Thursday and met Treadwell in New York, Friday morning. We were to pick up Putnam at Washington and proceed to Charleston, Friday afternoon. Putnam had learned of the triple holiday and, after being three weeks in Washington, he had just finished up his work and expected to return to Boston the night before our arrival at the Capital. Instead of a joyful homecoming, he received a wire to meet Treadwell and myself at Washington and accompany us on our trip to West Virginia.

We left Washington on the Chesapeake & Ohio Railroad at 2 P. M. on Friday and in spite of the heat, enjoyed the journey. The Shenandoah Valley was most attractive at this time of the year. There were disturbing elements, however. On the train from New York to Washington we read in the newspaper that West Virginia state troops had been ordered to the mining districts without specifying any particular place. It was even more disconcerting when, after purchasing a copy of a Richmond paper at some little station in Virginia, we read the following:

ORDER OUT WEST VIRGINIA TROOPS  
TO BREAK UP MARCH ON MINES  
*Two Companies of Guardsmen Sent  
to Cabin and Paint Creek Districts*

Charleston, W. Va., June 30.—Two companies of the National Guard were sent to the Cabin Creek and Paint Creek district early today to break up an incipient march against mines on Cabin Creek which had been operated on open shop basis.

The troops were mobilized and dispatched on order of Governor Morgan after he received reports that bodies of men were gathering on Paint Creek and marching toward Dry Branch, Cabin Creek.

This sounded most interesting, as our destination was Milburn, about seventeen miles up Paint Creek from the main line of the C. & O. Railroad. Not that we had any fears.

No, indeed! But, of course, there were the folks at home to consider. Before leaving Boston, I had been cautioned not to take any chances, but after an 800 or 900 mile journey, it would naturally take a regular disturbance to make one turn back before completing the task assigned.

Our train was scheduled to arrive at Charleston at 3 A. M. Friday, at which time we were required to leave the train as the sleeper continued on its way. We jointly and severally cautioned the Pullman porter to awaken us at 2.30. While slumbering peacefully, I felt a tug at my elbow. I switched on the electric light, looked at my watch and discovered that it was just 3 o'clock. On peering through the window I could see that we were approaching the city. Five minutes isn't a whole lot of time to dress and get one's belongings off the train, but we managed to do it, although Put had to finish dressing on the station platform.

We took the last available taxi to a hotel where Treadwell and Putnam registered. In the meantime, I requested the taxi driver to take me to the state Capitol where I expected to find an orderly in the Adjutant-General's office glued to a telephone ready to receive orders at any moment to mobilize the entire state militia. We approached some ruins, which might have been the Roman Forum, and I was advised that this was all that remained of the old state capitol building, but that the departments were housed temporarily in a wooden structure across the way.

Sure enough, the temporary capitol was lighted up, but the front door locked. After hammering on the door for five minutes, a sleepy looking individual came ambling along and with great difficulty unlocked the revolving doors. He turned out to be the night watchman, the only man in the building at the time. He could give me no information as to the movement of the state troops, so I proceeded to the police station (time 3.30 A. M.). Here I was received very courteously by a couple of police sergeants who kindly presented me with a Charleston evening newspaper announcing the return of the troops to Charleston that afternoon.

My chauffeur was not so sure about the return of the troops, stating that they had gone down to the mining district in hired automobiles, all of which had returned empty. Well, anyway, I had endeavored to cover the ground as far as precautionary measures were concerned and turned in at 4 A. M. after leaving a call with the night clerk for 7.30.

There wasn't much choice of trains from Charleston to our destination, only one a day in each direction, so that it was essential to catch the 9 o'clock train. To get to Milburn, we returned East over the Chesapeake & Ohio to Paint Creek Junction, at which point it was necessary to change cars for the Paint Creek branch.

We hung around Paint Creek Junction more than half an hour after the time scheduled for the train to leave for Milburn, for lack of a locomotive to haul us. One finally showed up and we proceeded on our way up the creek. It took an hour and a half to make the 17 mile run to Milburn, making eight or ten stops at mining camps along the way, also passing several abandoned camps. At two of these however, there seemed to be one or two families that had remained; What for, nobody knows.

On approaching Milburn we were agreeably surprised to note the high quality of the dwelling houses. Nothing wonderful, but far superior to those we had passed down the creek. A large crowd of striking miners was on hand at the station, which consisted of a rude platform for receiving freight and a sign marked "Milburn." Two members of the West Virginia state constabulary with pistols on their hips furnished a pleasing sight. We alighted from the train, crossed the bridge to the Company's store and office, an excellently constructed building very well maintained. After meeting the Manager of the mine and the Engineer, we were escorted to the "Club," where we were to put up during our stay.

The "Club" consisted of two two-story boarding houses. It was not exactly a club, but it did have a bath tub, thereby gaining distinction over the neighboring houses. After sojourning at the "Club" a few days, we gathered that the occupants of these two buildings included striking miners, non-union miners who were working the mines, two members of the state constabulary and our party of three. The strikers said nothing, the non-union miners said nothing, the members of the state constabulary said nothing, so we remained silent. The conversation at the table was not animated, consisting mainly of "Please pass th' butter" and "Please pass th' bread." The whole camp was painfully silent. After a spell of this, a street brawl or dog fight would surely have been welcome. The silence became oppressive. On meeting anyone on the street, however, there was the

formal exchange of greeting of "How d'do," with the accent on the "how." Several of the strikers did ask us whether or not we were mining inspectors, but we gave them an evasive reply.

As fate would have it, we arrived at Milburn Saturday at noon, ready for work, just as our brothers at home were starting out for a triple holiday. Our principal desire, however, was to get through and get away, so that we started in at once to work days, nights, Sunday and holiday, so as to clean up as soon as possible.

The first night was hot, and with two in a bed and the boarding house cow outside the window with cow bell around her neck, grazing all night long, there was not much sleep for me, at least.

Wasn't it Shakespeare who said:

"For work we love we rise betime,  
And go to't with delight."

Well, whether we loved our work or not, we rose betime, mainly because the breakfast bell rang at 5.30 A. M. This had its advantages, however, because it enabled us to start out at 6.30 sharp and make a day of it. The weather was far from satisfactory. Saturday afternoon, showers; Sunday, showers; Monday, showers in the morning, heavy rain in the afternoon; Tuesday, July 4, rain all day. At home I would have heard the familiar question, "Can you find your rubbers and umbrella?" Nothing like that at Milburn. I always supposed I couldn't stand wet feet. The problem was solved easily and simply, too. The recipe is to start the day with shoes and socks thoroughly wet, and no harm results.

The Milburn camp was pleasantly situated along the banks of the Creek with more than 100 dwelling houses, a theatre, two churches, a large store and office building, and all the necessary buildings required for mining purposes. The roofs of all the buildings were covered with fine white pebbles which gave a most pleasing effect. The dwelling houses ranged in size from two rooms to seven rooms. There were two officials' houses located upon the hillside, a hundred feet above the Creek, which were large, well constructed buildings, thoroughly equipped in every way, and which would compare with the best grade frame houses in any city.

In order to get to the mouth of the lower mine, it was necessary to be hoisted up an incline at an angle of 45 degrees,

then walk more than a mile along the mine car tracks, most of this distance being in three tunnels. These tunnels were low studded in places and it was a case of crouching and stumbling along in the dark. The fact that a live trolley wire was strung just above the right ear didn't add to the peace of mind. The mines themselves were even more low studded than the tunnels, but as Treadwell was to cover this part of the work, Put and I didn't worry.

As I said before, we were keen to finish up and get away. Not that we want to knock the town. We don't. It was far superior to any of the other camps in the Paint Creek Valley. Furthermore, the company officials were regular fellows, and this helped a whole lot. We just missed being able to catch the 8.10 A. M. train Thursday, July 6, so that it looked like another 24 hours at Milburn. The General Manager, however, came to our rescue and offered to take us over the mountains, some 25 miles, to Montgomery, a town on the main line of the Chesapeake & Ohio Railroad. The G. M., mine engineer, and camp physician, wanted to go over to Montgomery anyway to visit a barber shop, the local shop being closed.

We finished up about noon, and at two o'clock, seven of us piled into a Buick, and with two suit cases, three bags and three sets of plans, the car was completely filled.

The ride to Montgomery was a thriller! We had to pass over two mountains and the road for the most part was chisled out of the side of the hills. I doubt very much whether there is a highway west of the Mississippi River with more hairpin turns than had this road. Of course, the valley was not generally more than a couple of hundred feet below the road, compared with much greater drops in the western country, but in case of a tumble, it is likely to be the first couple of hundred feet that are the hardest and do the damage.

This road was an excellent example of highway engineering and exceptionally well constructed, the pitch being always toward the mountain. This feature made it easy riding on the outer turns but on the inner curves the banking was in the wrong direction, which made it bad for the tires as well as uncomfortable for the riders. The car was some speed wagon, a sure enough advertisement for the manufacturer. The doctor and I exchanged quite a little conversation,

(stage whispers, of course, so as not to offend the G. M. at the wheel), about how we were moving so fast that we could not really enjoy the scenery, and how we hoped it would not be our last ride over this road, and the like. We felt that the effect of our conversation was being recorded on the speedometer. As luck would have it, we met only one car on the mountain road and that on a straight run.

We were a little short of money and contemplated cashing a check on our arrival at Montgomery. Although the bank was closed when we arrived, our friends were able to hunt up some of the officials who were glad to accommodate us with as much money as we desired.

The train for the East was scheduled to leave at 7.30 P. M. and what was my chagrin when I learned, upon telephoning Charleston, that all berths had been engaged. The drug store proprietor, overhearing my telephone conversation, suggested that we might proceed East as far as Hinton, where there was a good hotel, spending the night at Hinton and continuing to Washington the next day. This meant a 12 hour delay and was not at all pleasing to us, as we were eager to arrive home as soon as possible.

On the arrival of the train, however, we learned from the Pullman conductor that there were two upper berths that were not occupied, so that our visit to Hinton did not materialize. We arrived at Washington, Friday morning about forty minutes late, but with five minutes leeway to catch the "Colonial" for Boston.

As usual, most of our troubles never happen, and instead of this trip being a riot, it turned out to be a "dud."

While in the mining districts, our motto was "silence" so that we were unable to learn anything with regard to the merits or demerits of the strike. From my own personal observations, however, I can say that, in the district we visited, the miners work hard, under particularly severe conditions, and with scant opportunity for recreation after their day's work is done.

## Conditions In Stone & Webster Territory

*The managers of the companies operated by Stone & Webster, Inc., write to the Management Division of Stone & Webster about the first of each month with reference to conditions in their respective localities during the preceding month. A digest of these letters is published each month in the Stone & Webster Journal.*

### GENERAL NOTES

The Managers' Convention for 1922 will be held in Boston, October 9, 10, 11 and 12. The following committee has been appointed: HARRY T. EDGAR, chairman; CHARLES F. W. WETTERER, A. STUART PRATT, MARCY L. SPERRY, CHARLES W. KELLOGG, HENRY A. LEMMON, EDWARD F. FLYNN, secretary.

MR. C. A. STONE is spending his vacation cruising along the Maine coast.

MR. E. S. WEBSTER is enjoying his vacation at North Haven, Me.

MR. RUSSELL ROBB has also chosen Maine as the scene of his vacation, being at Seal Harbor.

MR. H. G. BRADLEE left Boston on August 9, for a motor trip through the White Mountains. He will spend a week at Dixville Notch.

MR. F. P. ROYCE sailed on the *Acquitania*, August 1, for Liverpool.

MR. H. H. HUNT is away on his vacation, which he is spending at Duxbury, Mass.

MR. A. STUART PRATT has returned from his vacation.

MR. M. L. SPERRY has returned from his vacation at Brooklin, Maine.

MR. W. H. BURKE has returned from Pinewood Camps, Canton, Maine, where he was accompanied on his vacation by Mr. J. L. ALEXANDER, manager of the Keokuk Electric Company.

MR. J. H. BISSELL is spending a month at Cataumet, Mass.

MR. H. VITTINGHOFF has returned from Halifax, N. S. and left for the Northwest.

MR. L. C. BRADLEY, district manager, of the Texas district, was in the office the first week in August.

MR. ANSEL A. PACKARD has been appointed local manager of the Middletown division of the Connecticut Power Company.

MR. H. L. HARDING, assistant treasurer of the Houston Electric Company was in the office during the second week of August.

The convention of the American Society of Civil Engineers, recently held at Portsmouth, N. H., was attended by MESSRS. L. S. COWLES, H. A. HAGEMAN, A. A. NORTHRUP and F. M. WOOD. The trip included a special train to Portland, Maine, a shore dinner on Long Island, in Casco Bay and a steamer trip among the islands.

MR. CHARLES E. TRULL, formerly secretary to Mr. SPERRY, has been transferred to the Pawtucket division of the Blackstone Valley Gas and Electric Company. Mr. J. B. HAYES, formerly with the Nova Scotia Tramways Company, Limited, succeeds Mr. TRULL.

MESSRS. WILLIAM C. BRANDES, State University of Iowa, Engineering College, 1922; FRANCIS J. DOMINGUES, University of Texas, 1922; HARVEY L. WILLIAMS, Massachusetts Institute of Technology, 1922; and KENNETH C. LASSETER, Georgia School of Technology, 1922, have joined the Statistics Department.

MR. REGINALD C. BURR, formerly of the Statistics Department, has sailed to Ponce, P. R. to be employed by the Ponce Electric Company.

MR. J. W. HOWARD has been transferred from the Statistics Department to the Fall River Gas Works Company as assistant to the sales manager.

MR. W. E. TUCKER, of Tyler, Tucker, Eames and Wright, has returned to his island in Lake Winnepesaukee, N. H., to finish the unexpired term of his vacation.

CAPT. JAMES FRANCIS McLAUGHLIN, superintendent light and power department, El Paso Electric Railway Company, and secretary of the BULLKONEY CLUB, arrived in Boston, July 20. The following day there was a luncheon in his honor at the Boston City Club attended by CHARLES F. W. WETTERER, JOHN H. BISSELL, PHILIP L. WARREN, RALPH H. WILLIAMS, JOHN T. G. NICHOLS, LUTHER R. NASH, JAMES J. REYNOLDS, William E. Tucker, of Tyler, Tucker, Eames & Wright, JAMES BERTRAM HAYES, HENRY ROGERS WHITON, WILLIAM T. CRAWFORD, EDWARD F. FLYNN. Two attractive pipes were presented to CAPTAIN McLAUGHLIN.

#### BATON ROUGE, LA., JULY 21

The Louisiana Railway and Navigation Company has applied to the Commission Council for permission to parallel its present track with a second track. Officials of the company state that several new industries are seeking locations along its right of way, but they cannot be served without additional trackage facilities.

The Standard Oil Company is running at full capacity, and other industries report a normal business for this season of the year.

Wholesalers and retailers in all lines report excellent business for this time of year, and are looking forward to a normal fall business.

The month of June was the best month we have had this year, and although we do not anticipate quite so large gross earnings for July, present indications are that railway earnings will be well over the estimate, and that earnings in the other two departments will at least equal the estimates.

Work has been begun on the new State-Times building on the southwest side of Florida Street between Third and Church Streets.

Announcement has been made of the plans to erect a new two story office building on the site of the present Elk's Theatre building on the northwest corner of Florida and Third Streets. Foundations will be laid for several additional stories. This is one of the most valuable corners in town, and the replacing of the present unsightly structure with a modern building will be a great improvement.

There is little change as to labor and employment conditions. About one hundred and fifty men left the local shops of the Y. & M. V. railroad when the strike was called, but most of them are awaiting the settlement of the strike and are making no effort to obtain other work.

J. J. DOWLING, gas engineer, who has been in the employ of this company for the past two years, has been transferred to the Fall River Gas Works Company and left Baton Rouge on July 3 to take up his new duties there. Before leaving he was presented with a handsome traveling bag by the members of the organization.

JAMES LINNEHAN, ledger clerk, has been advanced to paymaster.

G. W. LOVELAND, assistant cashier, has been advanced to cashier replacing J. N. LOPEZ who has been advanced to the position of ledger clerk.

EDDIE THOMAS, a former employee of this company, has joined the accounting department as assistant cashier. MR. THOMAS was formerly a member of this department but was transferred to the power station a few years ago. He was in a very serious automobile accident last summer and has just been able to return to work.



J. M. BERGERON has been employed as meter reader replacing C. H. KING who has been advanced to collector.

W. G. GAY, chief engineer, recently spent a few days in Rock Island, Illinois, attending a grotto convention which was being held there. MR. GAY visited the properties in Keokuk on his trip.

J. C. LAMB, sales manager, has returned from his vacation spent in Tampa.

R. W. LOVELAND, of the commercial department, spent his vacation with relatives in Wisconsin.

The company recently purchased a lot at the southeast corner of Florida and Fifth Streets where an office building will be erected. For some time our present office has been too small for our needs and in addition the business section of the city is growing away from the present office site. The new location will place us nearer the business section and will continue to improve as the city grows.

#### BEAUMONT, TEX., JULY 24

Local manufacturing industries are continuing at about an even rate, with probably a tendency to slackoff somewhat during the summer months. The refineries, however, are continuing to turn out a substantial output and are either now handling or contemplating handling considerable construction work in the near future.

Local wholesale and retail business is holding its own which is more or less in line with the normal condition in the summer.

From the standpoint of the company, the business outlook for the next few months appears excellent. During the summer months business is always good on account of the ice loads and they usually pick up through September. In addition to the normal power loads, we are showing an excellent growth in customers connected, which amounted to a net gain of 165 for June.

Building continues at an active rate and is chiefly centered in the construction of small homes.

Labor and employment conditions in Jefferson County have been probably better for the most part than any other section of Texas and so far the local situation has not been affected to any great extent by the railway strike.

MR. LUKE C. BRADLEY, district manager, spent July 1 in Beaumont on business.

MR. A. F. TOWNSEND, manager; MR. J. BOWES, lighting superintendent, Port Arthur; MR. H. E. BRAUNIG, superintendent of distribution, Beaumont; MR. W. A. ROBERTSON, railway superintendent and MR. P. E. MILLER, assistant treasurer, left for Galveston on July 10, to attend the district managers' meeting held in that city on the 11th and 12th.

MR. L. C. SINGLETON, claim agent; MRS. RUTH CARNES, of the railway department and MISS PAULA KIRKLEY, of the purchasing department, are among those on vacations.

MR. A. HATLEY, formerly in the transportation department of the Houston Electric Company, arrived on the 20th to fill the position of purchasing agent, that position being vacated by MR. H. C. MORROW, who leaves the organization on the first to go in business for himself.

MR. F. C. TAYLOR, chief engineer, returned Wednesday, July 19, after a six weeks' stay at Hot Springs, Arkansas, where he had been taking the baths to recuperate from a run down condition.

MR. A. H. CANNON, engineer in the Port Arthur station, left June 15 for his vaca-

tion, after which he will report to the Galveston Electric Company as chief engineer, he having been transferred to that company.

MR. LANCASTER, assistant treasurer of the Galveston Electric Company, was in Beaumont on business, July 18.

MR. T. H. SMITH, of the Beaumont accounting department, left for Galveston on July 20 on temporary work for the Galveston Electric Company.

#### BELLINGHAM, WASH., JULY 25

All of the lumber mills in the vicinity of Bellingham are operating on two shifts. The Clear Lake Lumber Company is still operating but its manufacture is curtailed considerably on account of the scarcity of logs.

Both of the cement plants are still operating to capacity and have large future orders.

Pacific American Fisheries report a normal catch on the Pacific side of the Alaska fishing grounds but the catch in the Puget Sound district so far has been somewhat disappointing.

The tourist season so far is showing a marked increase over the previous year and a great many foreign cars pass through the Customs at Blaine keeping several men busy clearing the tourists who include Vancouver in their trip.

The Milk Products Company, including the Co-operative Associations are doing a good business but will probably have to pay more for the milk if the dry weather continues as the farmers at the present time are feeding their surplus stock of hay to their cattle and the hay crop this year is hardly 50 per cent of normal.

Street railway receipts are improving right along and it is hoped that the inauguration of the weekly pass will still further increase these earnings.

Interurban receipts are showing a very large increase, the hourly service being a huge success and the combination stage depot turning over a great many of the stage passengers.

Freight receipts on the interurban are showing an increase in carload freight as there is an improved condition in the lumber market. Embargoes which are being placed on account of the strike may have some effect upon the east bound lumber shipments. L. C. L. freight is showing some improvement and the recent cut in rates has resulted in the taking off of the auto truck, between Bellingham and Sedro Woolley.

Residence lighting in Bellingham is showing an improvement but not as great as anticipated, undoubtedly due to the continuous attacks by the local papers on lighting rates. This is also affecting the gas send-out to a certain extent. Lighting receipts will be increased as the towns of Everson and Nooksack have recently been connected up.

Building is on the increase and several new blocks are under construction.

The coal miners strike is gradually petering out and the miners who are working are turning out more than the previous miners and established a new record on an eight hour shift of 607 tons.

There has been no rain for nearly two months and thousands of dollars worth of damage has been done to the crops in both Whatcomb and Skagit counties. Considerable damage has also been done to the timber through forest fires.

On the evening of July 11, the new Interurban-Stage depot was formally opened by a dance for the employees, stage owners, drivers and their friends. Approximately four hundred people from Bellingham, Burlington, Mt. Vernon, Everett and Seattle were present. Early in the evening small celluloid buttons with "Every

Hour On The Hour, Seattle Limited, Interurban" were distributed and the slogan of the new hourly service fixed permanently in their minds. Everyone attending reported a very fine time. Some of the out of town visitors were: MR. GEO. NEWELL, manager; MR. C. F. KIRCHHINE, assistant treasurer; MR. A. M. CHITTY, superintendent of light and power; MR. H. S. ATWOOD, assistant sales manager; MR. CHAS. HAMILTON, assistant railway superintendent; MR. P. T. LEE, bus superintendent and MR. C. F. REDWARD, purchasing agent, all from Everett; MR. GEO. QUINAN, chief electrical engineer, MR. F. W. BROWNELL, comptroller, Mrs. Brownell and little daughter; MR. C. S. LINDSAY, engineer; MR. CARL HOGE, engineer, and MR. W. B. DONALDSON, purchasing agent, from Seattle; MR. K. C. SCHLUSS, superintendent of light and power and MR. G. O. SNIDER, purchasing agent of Tacoma.

This new station is a one story brick structure with a front of 75 feet, including a driveway on both sides of the main building and is 125 feet long. The stages enter the covered driveway on the north side of the building, discharge their passengers, drive around the station to the south side and load. The interurban cars load and unload from the tracks directly in front of the station. A large marquee in front of the station extends to the street and will be sufficient protection when the weather is bad. The inside of the station is utilized by the dispatchers office, ticket office of open hexagonal shape, women's rest room, men's smoking room, concession spaces and waiting room. The interior is well lighted with 200 watt indirect lighting fixtures. The outside is painted a light color and is illuminated by flood lights mounted on nearby poles. A large sign is mounted on the roof of the building and is visible for several blocks in all directions.

Seventeen stage lines make 77 trips daily from the station and the interurban leaves every hour from 7 A. M. until 6 P. M. with extra service on Saturdays and Sundays.

On July 12 and 13, the third meeting of purchasing agents, engineers and line construction department heads was held in Bellingham. The work of standardization of pole line hardware and fixtures is progressing very favorably.

All those present at the meeting enjoyed a luncheon given at the Hotel Leopold by the heads of the departments of the Bellingham division. MR. R. W. LINDLEY, assistant sales manager, was unable to attend as he is a 100 per cent attendance member of the Kiwanis Club and their luncheon was held on the same day.

On the afternoon of the 13th, the party was taken on a sight-seeing trip about our new line extensions and nearby vicinities where extensions have not been built as yet.

On July 14, H. B. SEWALL, manager, and MR. GEO. QUINAN, chief electrical engineer, drove to Vancouver, B. C. to confer with the officials of the British Columbia Electric Company. The new power contract is now ready for execution. The friendly attitude and hearty co-operation of the B. C. electric officials makes business relations with them very agreeable.

C. C. COATES, assistant railway superintendent, reports a very pleasant vacation spent on the San Juan Islands.

MR. W. A. BURLESON, accounting department clerk, reports the birth of an eight pound son on July 3. Both Mrs. Burleson and son are doing nicely.

Baseball is now claiming the attention of the athletically inclined employees. Two games were played between the Bellingham and the Northern Division and the Northern Division proved itself the better. Challenges were received from Seattle and Everett and the two divisions combined and played Everett on July 22, at Everett. Bellingham was defeated six to five in a close game but the men from

Bellingham were not satisfied and a return game will be played in Bellingham on August 5.

The sixth division of the Pacific Fleet, composed of the superdreadnoughts *New York*, *Texas* and *Oklahoma*, and seven destroyers arrived in Bellingham Bay on July 21. This division will remain for nine days and then another division will arrive and this one leave. Very elaborate plans have been made for the entertainment of the officers and men. Sight-seeing trips to Mt. Baker, nearby lakes and trout streams as well as dances and parties have been organized.

Rear Admiral Jackson, in command of the division, and nine other officers were guests at the Rotary Club luncheon July 24. In the evening, all the officers were guests of the Bellingham Golf and Country Club at a dance. Beginning July 25, pavement dances will be given quite often for the sailors.

On the evening of July 15, power was turned on the Everson-Nooksack extension. The extension is seven miles long and takes care of 240 new customers in these two small towns and surrounding country. On that evening, the event was celebrated with the aid of a band concert and pavement dance. H. B. SEWALL, manager, started the evening by a short talk about electric service and the chances of improvement and the company's relations with the consumer. After this talk, 250 couples enjoyed the dance until a late hour.

The people of Everson and Nooksack are very enthusiastic about their new power service and should prove very valuable to the company before many years.

#### BROCKTON, MASS., JULY 22

A slight improvement has recently been shown in local industries. Three of the largest shoe companies, while not running at full capacity, have returned to full time operation.

Business with the local wholesale and retail trade is as good as could be expected.

The improvement referred to is reflected in the company's business. The daily load has increased and substantial improvement is being shown in the daily output. New business is also in a very satisfactory condition, there having been 257 new customers connected during the past 30 days.

Activity in the building trades is improving; building permits for June amounted to \$320,000, an increase of \$80,000 over the same month last year. Two additions are to be made to the factory of the Conrad Shoe Company, which will add over 10,000 square feet of manufacturing space.

Work has been started on the extension of Centre Street, and a permit issued for a public garage on this extension, which it is estimated will cost \$80,000.

The labor situation is probably better here today than it has been for the last 18 months. It is reported that certain classes of shoe workers are very much in demand; advertisements appearing daily in the newspapers for shoe cutters and stitchers.

FRANK ENOS, of the accounting department, is with Battery E of the National Guards at the Barnstable Camp grounds.

MRS. JESSIE HAPGOOD, billing clerk, spent her vacation in New Hampshire.

RAYMOND WELCH, of the accounting department, reports a most enjoyable week at Provincetown.

MRS. RUBY NIGHTINGALE, telephone operator, has been spending her vacation at Swift's Beach.

RUDOLPH LANDERS, of the accounting department and FRED MONKS, of the meter department, have been taking short trips for their vacations.

MESSRS. H. A. LEMMON and R. H. WILLIAMS, of the Boston office, TOM WALKER,

of the Haverhill Company, and J. E. NUTE and MR. STEWART, of Fall River, were welcome visitors during the month.

MR. P. J. BRENNAN, of Denison, Texas, was a recent guest of his son, WILLIAM BRENNAN, assistant to our electrical engineer.

#### COLUMBUS, GA., JULY 26

The Bibb mill has resumed night operation in all departments.

The Coca-Cola Company's net earnings for May, as published in the local newspapers here, were \$950,000, and they expect the June earnings to be more than \$1,000,000. Dividend payments will be made quarterly and without the formality of directors' actions.

For June, Georgia had 2,504,160 active spindles and ran 658,338,285 spindle hours.

The peach crop for this season will be about 1,400 cars short, and practically the entire yield has already been gathered. Present indications point to a very poor cotton crop, the boll weevil being one of the main contributing factors.

Bank clearings for the month of June are given at \$2,912,871. The Third National Bank this month declared a 2.25 per cent dividend on \$500,000 capital stock. The capital stock of this bank was recently raised from \$250,000 to \$500,000.

Retail business here continues rather quiet. Many of the merchants are featuring mid-summer sales in order to clear out their stocks before buying for the fall revival of business.

The Tri-State Navigation Company reports a very flourishing freight business on the Chattahoochee.

There is considerable remodeling and repairing of stores and offices going on here. A new, up-to-date restaurant, which is to be run on the cafeteria plan, is to begin business within the next three weeks.

The company's gross receipts for June equaled the original estimates for the different companies.

A new passing switch has been installed in Phenix City and one will also be installed in Girard as soon as the track crew can get to it. During the rush hours the schedule into Phenix City has been changed from a 20-minute to a 15-minute headway. The same schedule will be used in Girard when the passing switch there is finished.

On July 20 about four hundred of the flashboards at Goat Rock were lost. The flow of the river, according to our records was only 9,500 second feet. The additional water coming down from Goat Rock destroyed about four hundred feet of the flashboards at North Highlands. River conditions for the past week have been such that both at Goat Rock and North Highlands the boards will be replaced within the next few days.

We are furnishing the Georgia Railway & Power Co. 1,000 kw. every day and at the same time are unable to get power from them on account of transformer trouble at Lindale. They expect to have their transformers out for at least 30 days. We are carrying this additional load by buying 1,000 kw. from the Eagle & Phenix Mills and carrying the remainder on the steam plant.

All lines of construction have been very active during the past month. A contract has been let for 20 new sets of officers' quarters at Fort Benning.

The Central of Georgia has constructed a \$75,000 coalshed. Improvements to the depot and station grounds will total around \$25,000.

The City of Columbus is doing considerable work in sidewalk paving.

A \$10,000 brick building is being constructed for a wholesale drug company.

The strike situation in the Central of Georgia shops here is quiet. The Central officials report that so far they have had no difficulty in maintaining their equipment in fair shape with the negro help they have secured.

The Seaboard Air Line has taken off several unimportant trains in order to properly protect their through traffic and to carry the United States mail.

Unsettled weather has prevailed practically the entire month. There have been several thunderstorms which helped to maintain the river flow.

MR. H. H. SCHOMBURG is back on the job and reports a very pleasant two weeks' vacation.

MR. L. H. CROWELL and family are spending a two weeks' vacation in the mountains of North Carolina.

On July 4, the employees of the Columbus Electric and Power Company enjoyed a barbecue and picnic on the Uchee Creek in Alabama.

The second half of the Industrial Baseball League is well under way, with the company team fighting strongly for top place.

The Lions and Tigers, the two teams of the transportation department in the accident prevention campaign, continue their good work. Only 15 accidents have been reported so far for July.

The transportation department was 100 per cent perfect in the Stock Subscription Campaign carried on here.

MR. C. E. BELL, superintendent of installations, is now studying the operating costs of a Ford.

MR. RALPH PETERSON, superintendent of meter department has gone to Newark, N. J., for a month's course in the meter department of the Westinghouse Co.

MR. J. G. GAHM, of Boston, is now a student engineer and is stationed temporarily at the steam plant.

MR. JACK BRADLEY, claim agent, is enjoying a two weeks' vacation.

Three new one-man safety cars were received this month and as soon as they are properly looked over, will be placed in service on the Phenix City and Girard lines.

The Fourteenth Street Bridge, which has actually been in service for the past month, will be formally opened this week with appropriate exercises.

#### CHICAGO, ILL., July 27

MR. GEORGE HIGGINSON, JR., is at present in Europe and will return September 1.

MISS KENNEDY has returned from a seven weeks' trip abroad.

MR. C. L. HOYT, of the New York office, is at present in Chicago to assist in a reorganization of the Accounting Department of the Securities Division.

MR. G. O. MULHFELD visited us the early part of this week.

#### EL PASO, TEX., JULY 21

Business with the local industries is reported to be generally quiet, although several firms have added a few more men to their payrolls.

The mills in this district are gradually increasing their activities with growing payrolls, and the smelters are reported operating at 60 per cent of their capacity.

Wholesale and retail men report that business continues poor, with collections bad.

The condition of the company's business and outlook for the near future is fair.

Five hundred and thirty-three bungalows and other residences valued at \$1,917,130 were built in El Paso during the year ending July 1, 1922. Between July

1 and 10, permits were issued for 82 bungalows to cost \$252,550 and four apartment houses costing \$97,000.00. During the past year permits were issued for 22 apartment houses and hotels valued at \$484,325. Rent houses are plentiful. The building permits for June, 1922, amounted to \$344,405.

At the present time there is much unemployment among common and skilled labor due to the local railroad strike and to the large number of men who have recently come to the city with the expectation of securing work with the railroads as strike breakers.

MR. ALBA H. WARREN, manager; MR. ALVES DIXON, railway superintendent and MR. J. F. McLAUGHLIN, lighting superintendent, attended the district managers' meeting held in Galveston, Texas, July 11 to 12.

MR. A. J. MAHAN, voucher clerk, is spending his vacation with his family on the Ruidosa in New Mexico.

MISS FOY WOOD has joined our organization as stenographer in the accounting department. Miss WOOD takes the position vacated by Mrs. NORA POQUE, who has been transferred to the lighting superintendent's office.

MISS MATTIE HOY, ledger clerk, is spending her vacation at Hot Springs, N. M.

MR. LANSING THORNE, claim agent, has returned from a two weeks' vacation spent in Fort Worth. MR. THORNE was accompanied by Mrs. Thorne and their two sons.

MR. J. F. McLAUGHLIN is in Boston on a business trip.

MR. W. H. VALENTINE, meter foreman, is spending his vacation at Elephant Butte Dam, New Mexico.

MR. C. A. JOHNSON has joined the power plant force as electrician. MR. JOHNSON accompanied by Mrs. Johnson, arrived in El Paso, July 11, from Boston, Mass.

MR. A. F. CREAMER, meter reader; MISS A. L. BAKER, interurban and bridge clerk; MRS. E. M. HUNTER, stock clerk and MR. PAUL PUCKETT, collector, all of the accounting department, are away on their vacation.

MRS. PERRY STEVENS, telephone operator, is away on her vacation.

MRS. James E. Jordan and James, Jr., are in Cloudcroft, New Mexico for a few weeks visit.

MRS. EDITH BAILEY, telephone operator, is again at work after a brief illness.

MISS NAN GWYN has resigned her position in the commercial department and has left for Dalgerville, New York, where she will make her home.

#### EVERETT, WASH., JULY 26

Due to the continued dry weather, the lumber industry is now facing a very serious shortage in logs. There has been no rain in this part of the country for 60 days, the longest period on record in the past 30 years. As a consequence, forest fires have been of more serious magnitude than ever experienced before and practically every logging camp of importance has not re-opened for operation since it shut down previous to July 4. The fire hazard has been too great. At the present time, unless the rain comes, it will probably be necessary for more than half of the mills in Everett to close, as their log stocks will not last them more than a week.

Local retail merchants report the trade around July 4 as being the best holiday trade they have ever experienced. Since that time, however, there has been a material slump, although the month of July will compare favorably with last year.

Local wholesale hardware merchants report a continued and increasing demand for hardware of all types, particularly pipe, sheets and bars. It is believed from

unofficial reports received that the hardware merchants, due to the activity in the lumber trade, are doing more business than ever before in their history.

Due to the fact that the 4th of July occurred on Tuesday this year, a great many people started their vacation and week-end trips on Friday and Saturday previous to the holiday. As a consequence, during the first five days of July the Interurban, as a whole, made a record for passengers carried, which is far beyond that ever previously experienced. The stage line had every car on the road continuously and was forced to hire two outside cars and have same available for the first five days of travel. During the month of July, last year, 7,124 passengers were carried on the stage portion of the line, while this year, in 24 days only, (the last data available) 11,208 passengers have been carried. For the entire line, the first 22 days of July show an increase over last year of practically 44.8 per cent.

Hourly service was instituted on the Northern Division between Bellingham and Mt. Vernon on July 1. As a consequence, the loading on the stage portion of the line has been very materially improved and the dead head mileage which was forced, due to the Bellingham loads being dropped at Mt. Vernon once every two hours instead of every hour, has been considerably reduced.

A vigorous campaign of advertising has been carried out in all the territory from Bellingham to Seattle and, while we have not available at the present time the segregated earnings of the old Northern Division, it is believed that they have already materially benefited by this increase in service. It is believed that Interurban earnings will continue to go above those of last year in that we are now receiving the benefit of the advertising carried during the past 12 months.

Receipts on city lines, the first 21 days of July, show a decrease of 2 per cent. When allowance has been made for the loss of the Snohomish Interurban earnings, the city lines show an increase of 10 per cent.

Actual construction has been started on the line transmission from Everett to Mukilteo to supply the Crown Lumber Co. Construction work on the Home Acres, Lake Stevens extension, is now held up due to lack of wire, which is expected this week. Upon receipt of same, this line will be rushed to completion.

Construction has progressed rapidly on the new Public Market and it is believed that they will open on August 10.

Due to the fact that the logging camps are now shut down on account of the continued drought and due to the railroad strike, there are quite a number of men available for work. However, it is believed that this is merely a temporary condition and unless business in general receives a severe set back, practically all available labor will be employed in this district during the balance of the summer.

#### FALL RIVER, MASS., JULY 22

While the cotton mills are operating on practically full time, sales of cloth are not large. The uncertainty of the cotton crop situation and the general labor outlook in the country at large are the chief factors that are retarding business. The trade needs merchandise but prices are the cause of hesitancy.

The merchants report business as being in a fair condition only.

The gas output for this month to date shows a gain of practically 4 per cent. The gain in meters for June was 106, for July to date about 40. With a probable coal shortage, an increased consumption of gas is looked for.

Building operations are about ten times greater than for the corresponding period of a year ago.

In the cotton industry there is nothing unusual in the labor situation to report,



there is some talk of closing the mills for one or two weeks but nothing definite has been decided upon.

There is a scarcity of mechanics in the building and allied trades.

MESSRS. NUTE, DEXTER, GILBERT, EAVENSON, BAKER, STEWART and BOOTHBY attended the convention of New England companies under management of Stone & Webster, Inc., at New London, Conn., June 28-30, several others making the trip for one day.

On July 10, the company held its eighth annual outing at Rocky Point making the trip by boat. Baseball and sports were enjoyed and a shore dinner was served. Visitors at the outing included Mr. H. T. EDGAR, Mr. H. A. LEMMON, Mr. J. H. BISSELL and Mr. RALPH H. WILLIAMS, of the Boston office; Mr. T. L. WALKER, manager of Haverhill Gas Light Company; Mr. WILLIAM MCGREGOR, manager, and Mr. R. BUCKMINSTER, superintendent, of the Pawtucket Gas Company and members of the executive force of the Engineering and Construction Division engaged in building our new water gas plant.

A theatre party was held at the Empire Theatre, July 17, a large number of employees attending.

On July 17, Mr. C. H. EDLUND, formerly of the Pawtucket Gas Company, arrived to take a position in the accounting department.

Mr. WILLIAM J. EAVENSON, sales manager, is in attendance at an Industrial Fuel Gas course being given at the Massachusetts Institute of Technology for industrial gas salesmen.

#### FORT MADISON, IA., JULY 25

All local manufacturing plants are running up to normal capacity. The Atchison, Topeka & Sante Fe railroad report the heaviest traffic for a number of years.

The Perfection Tire & Rubber Company are contemplating the installation of oil burners for their steam plant, to take the place of coal burners which they have at the present time.

The pencil department of the W. A. Sheaffer Pen Company has reopened after being closed for several weeks for inventory and repairs.

Owing to the number of men out of work on account of the strike, local retail business is very poor. Not only is the strike holding off buying, but it seems that most of the rest of the residents are waiting to see how the strike is going to come out before buying anything that is not an absolute necessity.

Company business is holding up very well, considering the other business conditions in town. The strike is making collections rather hard, but is not affecting our earnings very much at the present time.

Ninety-four lights of the new white way were completed and tested out on July 8 and have been in operation since that date.

The contract has been let and work started on the new high school, which, according to the contract is to be finished by August 1, 1923.

Work has been started on resurfacing 23 blocks on Third, Fourth and Fifth Streets and the intersecting streets. The contractors expect to have this work completed in about thirty days.

There are a number of new houses being built, which, together with the building of the new Methodist Church, the Knights of Columbus Hall and the remodeling of the Masonic Temple make building activities an important factor.

Outside of the striking shopmen there are no men out of employment, in fact,

there are a number of the strikers that are working either on the streets or nearby farms to relieve the shortage of labor in other lines.

MR. JOHN W. KELLY returned on June 30 from showing his bride the wonders of Boston, leaving shortly thereafter for Keokuk to assume the duties of assistant treasurer.

MR. WILBUR E. DAVIS arrived from Keokuk on July 5 to take the assistant treasurer's position left vacant by MR. KELLY.

MR. L. G. JOHNS spent his vacation at the home of his parents in Bonaparte, Iowa, from July 5 to 19.

MR. P. I. ROBINSON attended a hearing on rural service before the Illinois Commerce Commission at Chicago on July 13. MR. ROBINSON went from Chicago to Fenville, Michigan to join his family for a short vacation.

MISS ELEANOR SCHMIDT was away on a few days vacation from July 18 to 24.

#### **GALVESTON, TEX., July 25**

Due to increased freight tonnage, three Morgan liners sailed from New York for Galveston last week for the first time in more than a year. This, it is hoped, means the restoration of the tri-weekly service to Galveston. The Steele Steamship Line has announced that sufficient tonnage has been acquired to inaugurate a regular ten-day service between Galveston and all principal ports on the Pacific coast. The new service will begin the latter part of August.

Representatives of the Oriental Cotton Trading Company of Japan were in Galveston inspecting port facilities for handling cotton. According to the statement made by these men, Japan will import a much larger volume of cotton the coming year from the United States than during the fiscal year just past on account of the great improvement in the economic conditions in that country.

Four thousand nine hundred and fifty-six tons of coffee, valued at \$1,318,522 were received at this port from South America during the first six months of the present year. Imports for the month of June alone were more than one-half of the entire business for the preceding five months. It is the opinion of the general manager of the Texas Consumers Company that over one million dollars yearly could be saved in the southwestern part of the United States in decreased freight charges if Galveston were made a coffee importing port of importance.

Exports through the port of Galveston for the month of June totaled 111,393 tons, valued at \$24,280,932, while imports aggregated 176,012 tons, valued at \$2,076,647. These totals indicate a gain in the value of exports when compared with figures for the previous month. However, imports show a decrease when compared with the month of May. The maritime report for June shows increases in exports of cotton seed meal, flour, lumber, metals and miscellaneous commodities when compared with figures for the preceding month. However, exports of cotton, cotton seed cake, sulphur, rice and ixtle fell below that of the preceding month. Wheat exports from Galveston for the fiscal year ending June 30, show a total of 43,299,895 bushels, which reflects a decrease of 42,781,576 bushels under the figures for the previous year.

Imports of raw sugar for the fiscal year ending June 30 aggregate 244,440,828 pounds, an increase of 201,860 pounds above the total for the previous year.

The total volume of oil handled through Galveston, Texas City and Freeport for the fiscal year just ended amounted to approximately 24,847,000 barrels. Galveston's total imports were 9,365,000 barrels, reflecting a decrease of 4,605,700 barrels when compared with last year.

The year 1921-22, ending June 30, was the greatest in the history of Galveston from a standpoint of customs collections, which is principally due to the heavy sugar importations. According to figures issued by the department of commerce at Washington, the Galveston customs district handled more than one-eighth of the entire exports from the United States during this period.

General crop conditions in Texas are as good as last year, according to railroad officials. Crops will be late on account of late planting which was occasioned by the floods and heavy rains throughout the state, but will compare favorably with previous years.

At a meeting of the Southern Wholesale Dry Goods Association, which was held here this month, it was conceded that conditions in Texas are as bright, if not brighter, than in any part of the South.

The latest review of commercial agencies states that the cotton crop in all parts of Texas points to a larger yield, is in good condition and is bringing higher prices, which will afford farmers a larger profit. This is of particular interest to Galveston.

Approximately one hundred laundry owners from all parts of the state assembled here for the convention of the Texas Laundry Owners' Association on June 28.

July 1-8 was declared as "Elks' Play Week." More than five hundred visiting members and their families, representing 82 lodges within this district, were guests in Galveston during the play week.

Several hundred Houston Shriners were visitors to Galveston, July 15 to participate in a baseball game and swimming party.

A Sunday excursion train, the first since the curtailment of train service during the war, came into Galveston on July 16.

Building activities continue good in Galveston. Nearly three quarters of a million dollars have been invested by the people of Galveston in the Guaranty Building and Loan Company and loaned out by the company for the purpose of constructing and acquiring homes here. This company has recently completed the first fiscal year of its existence.

In the Rivers and Harbors Bill, passed by the Senate Committee on Commerce on June 29, authorization for the extension for the Galveston sea wall to a juncture with the south jetty is included. Besides the appropriation for the extension of the sea wall, \$150,000 has been allotted for work in Galveston channel and \$90,000 for maintenance work in Galveston harbor.

MESSRS. B. E. VANVLIET and W. J. FRANCIS have completed the audit of the books and records of this company.

MESSRS. T. E. KESSLER, shop foreman, and J. STEEL attended the conference for Vocational Training at the University of Texas at Austin, June 26-July 8.

MR. W. O. WARD, meter reader, has left the service of the company. His position has been filled by MR. M. J. CARAWAY.

MR. W. L. DROUILHET, billing clerk, has returned from a two weeks' vacation spent at his home in Oleander.

MISS JULIA THEOBOLD, stenographer, is spending a month in California and points of interest in the West.

Mr. F. M. Mings, of the El Paso Electric Railway Company, El Paso, visited Galveston during the month. Mr. Mings was formerly connected with this company.

MESSRS. R. B. PIERCE and E. E. STEWART, of the Northern Texas Traction Company, Fort Worth, were Galveston visitors during July.

MESSRS. T. H. SMITH, of the Eastern Texas Electric Company, Beaumont, and

D. V. THOMAS, of the Northern Texas Traction Company, Fort Worth, are in Galveston in connection with rate case matters.

Galveston was selected as the rendezvous for the periodical meeting of the managers of the Texas District, held July 11-12. This meeting also included superintendents, master mechanics and electrical engineers of the different companies. Those who attended were: MESSRS. W. E. WOOD, P. S. DUENWEG, W. E. BROWN, G. S. BRUSH, C. S. BRANN, F. J. BENNETT, S. P. MACFADDEN, Houston; G. H. CLIFFORD, V. W. BERRY, L. E. DELF, C. H. BOWEN, J. T. PORTER, Fort Worth; A. H. WARREN, ALVES DIXON, J. F. McLAUGHLIN, El Paso; A. F. TOWNSEND, J. BOWES, W. A. ROBERTSON, H. E. BRAUNIG, P. E. MILLER, Beaumont; R. G. CARROLL, R. B. LANCASTER, A. E. HART, G. F. PIERCE, D. MOORE, C. S. McLIN, M. B. OSBORNE, Galveston.

#### HALIFAX, N. S., JULY 24

Business conditions are about the same as in June. The fishing industry has been good with large catches being shipped through Halifax.

The Retail Merchants' Association reports business as being a little better than for some months, but no marked improvement is shown. The wholesale trade is quiet owing to poor industrial conditions in the eastern part of the province.

The gross earnings in the tramway department are approximately 20 per cent behind the corresponding period last year, the interrupted schedule on account of track construction during the month having a great deal to do with this. The gas department send-out shows about 12 per cent increase and the power station output about 11 per cent increase above the corresponding period of 1921.

Real estate inactive. Practically no change in conditions over June.

Considerable street paving was started by the city during the month, the concrete bed being now ready for the asphalt top. The company completed its new track work on Buckingham, Brunswick and Agricola Streets and a start was made on Coburg Road.

The unemployment office reports a very slight improvement over last month in labor conditions.

MESSRS. NASH, HAYES and TUCKER have returned to Boston following the completion of hearings on the valuation of the company's assets conducted by the Nova Scotia Board of Commissioners of Public Utilities.

MR. J. B. HAYES, who has been civil engineer in our tramway department for some time, was transferred to the Boston office on July 8. MR. HAYES' friends and associates in Halifax presented him with an attractive traveling toilet case as a token of their esteem and good will.

#### HAVERHILL, MASS., JULY 25

Through a shoe style show held in Boston during this last month, local manufacturers are reported to have received a large number of substantial orders and at present the factories are operating at a somewhat better rate than they did one year ago. It is expected that fall business in Haverhill will greatly exceed that of last year.

During last week two days were set apart as Dollar Days and local merchants report these to be the best ever held. The wholesale and retail business throughout the city is slightly below average and will probably not pick up until the increased activity in the shoe factories has made itself felt.

A slight improvement in out business is shown over last month in that our send-out for the month to date is 9 per cent greater than during the corresponding period

last year. Our June send-out was 2.3 per cent behind June, 1921. Our increases lag somewhat behind the general factory changes, but if present indications persist, we may expect a very good business during the fall.

One apartment house of 13 suites was started during the past month and another will be started soon. There is also a rather extensive garage being erected. Except for these, building operations are, I believe, somewhat below the average in other cities.

There is some unemployment in Haverhill, but not quite as much as is usual during the summer months. The cutters in the shoe factories are all employed and as their work progresses through the shop, other operators will be taken on. There are no serious labor controversies in any of Haverhill's industries.

MR. TOM P. WALKER, MR. W. R. BELL and MR. H. P. DAYTON attended the managers' meeting in New London held during the week of June 26.

The twelfth annual outing of the Haverhill Gas Club was held at Hampton Beach on July 5. About two hundred and twenty-five men, women and children attended and in spite of a persistent rain, enjoyed a program of sports and dinner at the Ashworth Hotel. This outing was designed especially in honor of Mr. and Mrs. J. P. INGLE, who are to make their home in the future in Jacksonville, Florida. Mrs. Ingle was presented with a very handsome floor lamp and Mr. INGLE with a smoking set, the gift of the company employees.

There were present as special guests, Mr. and Mrs. GEORGE H. PRIEST and daughter, Dorothy, of Brockton; Mr. R. BUCKMINSTER and son Curtis, of Pawtucket; Mr. RALPH H. WILLIAMS, of Boston, and Judge and Mrs. J. J. Winn, of Haverhill.

MR. W. R. BELL, sales manager and his assistant, MR. C. D. ROBERTS, attended the course in industrial gas engineering at the Massachusetts Institute of Technology.

MR. TOM P. WALKER attended the outing of the Fall River Gas Works employees at Rocky Point, R. I., on July 10, and reported a very fine time. On July 11, Mr. WALKER visited the office and plant of the Fall River Gas Works Company.

MR. RUSSELL W. PORTER has accepted the position as chief clerk with this company and reported for work on Monday, July 10.

MR. WILLIAM BELL, superintendent of distribution, and Mrs. Bell spent their vacation in Yonkers, N. Y., where they visited relatives.

MR. ALLEN, superintendent of the gas department and Mr. PEABBLES, chief chemist, of the Pawtucket Gas Company, spent one day this month with us going over our plant.

MR. JORDAN, from the accounting department, Boston office, was a visitor in Haverhill during the month.

MR. J. T. SULLIVAN, chief chemist, was a guest of the Boston Consolidated Gas Company in Everett, on July 18 and reported that he had a very interesting and instructive visit.

#### HOUGHTON, MICH., JULY 25

The situation in regard to the copper mining industry shows a slight improvement as compared with the previous month.

Wholesale and retail business is not very satisfactory. Merchants still report their sales show a decrease as compared with the corresponding period a year ago.

Business of the lighting company is holding up very well in view of the general conditions in the district.

There is little new building going on, although local contractors have had a considerable amount of repair work.

The mining companies continue to have difficulty in securing underground men at the wages now in effect. If price of the metal continues to advance, mining companies will be in a position to raise wages and an increase in wages would undoubtedly mean a substantial increase in their forces.

Miss Winifred Anderson Rowe, of Calumet, Michigan, and Mr. ERNEST S. FITZ, general superintendent of the lighting company, were married June 22, at St. Paul's Cathedral, Detroit. Following the service, an informal reception was held at the church and later a dinner was given at the home of Gen. and Mrs. Heckel. Mr. and Mrs. FITZ left for a trip through the East. Upon their return, they will make their home at 137 Blanche Street, Houghton.

MR. and MRS. R. ALLYN HAIGH visited Houghton on their honeymoon trip from Detroit, arriving Sunday, June 25. MR. HAIGH is manager's clerk to Mr. A. S. NICHOLS, manager of the Paducah companies.

MR. S. B. TUELL, receiver, and Mr. A. F. Ross, attorney, left Houghton on June 26 for a conference with the Michigan Public Utilities Commission at Lansing.

MR. EARL TROWBRIDGE, assistant chief clerk, and Mr. GARVIN MITCHELL, ledger clerk, at the Houghton office, went to Iron Mountain, Michigan, on July 7, to attend the Upper Peninsula Association's Convention of American Legions.

MISS CATHERINE CHIOTTI, railway clerk at the Houghton office, left on July 8 on a vacation trip.

MISS EFFIE FREEMAN, of the Calumet sales department, resigned her position on July 8. Her position has been filled by Mrs. E. RYAN.

MISS ANNA TOUSIGNANT, manager's stenographer, enjoyed a ten days' cruise on the yacht *Caviota of Ontonagon* during July.

The marriage of Miss Ruth Smothers, of Rossville, Illinois, and Mr. WILLIAM J. CAHOON, superintendent in the northern division of the lighting company, took place on July 13. MR. and MRS. CAHOON will be at home in the Nelson-Schroeder Block, Oak Street, Calumet, after September 1.

The Houghton office force entertained on July 18, at the Portage Lake Ship Canal, at a stag party in honor of Mr. E. R. Boatman and Mr. William J. Francis, former employees of the Houghton companies. There was a camp luncheon and games were played, in which the feature of the game was a home-run by DAVE POLMEAR. The "Harmony Four" quartette sang a number of songs.

MISS EDYTHE BARRY, stenographer in the purchasing department, left on July 21 for a vacation trip to Detroit.

MISS CECELLA BARTH, assistant cashier at the Houghton office, left on July 22 for Duluth on a vacation trip.

MR. DAVID POLMEAR, cashier at the Houghton office, leaves July 26 to attend the firemen's tournament at L'Anse, Michigan.

MR. W. J. FRANCIS, traveling auditor from the Boston office, arrived in Houghton early in July to spend his vacation with relatives and friends.

MR. E. R. BOATMAN, of the Paducah Electric Company, arrived in Houghton during July to spend his vacation.

MR. CLARENCE PELTIER, traction payroll clerk, is spending his vacation camping at Twin Lakes.

MISS MINNIE NIEMI, ledger clerk in the Houghton office, is spending a few days of her vacation camping at Huron Bay.

MR. RICHARD HOFFMAN, traction company inspector for a number of years, has

resigned his position and has gone to Detroit to locate. Mr. WILLIAM J. TOWSEY, trainman, succeeds Mr. HOFFMAN as inspector.

Mr. CARL JOHNSON, of the Calumet sales department, is enjoying a two weeks' vacation.

Mr. VICTOR BURMAN, Houghton meter department employee, is spending his vacation camping at the Entry.

Mr. A. F. REES, attorney, and Mr. F. J. BAWDEN, vice-president of the traction company, returned on July 24 from a cruise to Isle Royale on the yacht *Sea Fox*.

The Hancock High School was destroyed by fire on the night of July 24, total damage being estimated at \$250,000.

#### HOUSTON, TEX., JULY 25

Commodities destined for foreign countries during June and handled through the Port of Houston aggregated \$3,909,000, the majority of which was sent to England and Germany. The port director states that tonnage handled through the Houston port during the first six months of 1922, showed an increase of 93 per cent over first six months of 1921.

The city has agreed on the terms of the new franchise for the interurban down the ship channel and along the bay shore. At the present time the franchise has not been passed, but it is expected to be within a short time.

Building permits for the month reached a value of approximately \$800,000, and the total for the year has passed the eight million dollar mark. Some of the larger buildings under construction at the present time are the new Majestic Theatre, a ten story office building on Main Street at Capitol Avenue, and a ten story office building at Texas and Milam.

Plans have been completed for a new Methodist hospital to be erected at a cost of \$600,000. The first unit will cost \$150,000, and construction will probably start about August 1. The hospital is to be erected at Rosalie Avenue and Austin Street and will be five stories.

Construction of the new \$200,000 Central Fire and Police Station will begin within a week.

Work has started on a coal bunkering plant on the Houston Ship Channel being located in Manchester, and is to cost \$300,000.

The broad smile on the face of Mr. LUKE C. BRADLEY is due to the arrival of Miss Mary Jane Heffelfinger, the grand-daughter of our district manager.

Mr. and Mrs. S. P. MACFADDEN announce the birth of a son, Willford, on June 28, 1922.

MESSRS. WOOD, BRANN, BROWN, BRUSH, DUENWEG and BENNETT attended the managers' meeting at Galveston, July 11 and 12.

Mr. A. E. HATLEY has been transferred to Beaumont as purchasing agent of the Eastern Texas Electric Company.

Mr. McLINN, superintendent of transportation of the Galveston Electric Company, visited this office.

Mr. MORSE has just returned from a month's vacation spent in Colorado.

Mr. W. E. WOOD returned from Colorado where Mrs. Wood and family are spending the summer.

Mr. H. L. HARDING is spending his vacation with friends and relatives in Maine.

The Houston Electric Company complimented the managers and others who attended the managers' meeting at Galveston with a luncheon at the Rice Hotel on their return from Galveston.

MR. BRADLEY is enjoying his vacation in the East, and expects to visit the Boston office before returning to Houston.

JACKSONVILLE, FLA., July 28

Condition of the chief local industries is reported as being healthy. June imports, valued at \$499,200, were more than twice those of May. Exports were valued at \$492,200, consisting largely of lumber, naval stores, metal products, phosphate rock, and miscellaneous cargo.

Wholesale and retail business is favorable.

One entire line of this company has been equipped with the new safety cars, and from the increased amount of riding noted on this line, it is thought that they will consistently improve receipts.

The situation regarding labor and employment has been referred to locally as not in any sense critical. Labor, with the exception of that which is attributed to unsettled rail conditions, is quite fully employed.

Real estate is fairly active, limited during the month mainly to a considerable volume of small transactions.

From authoritative figures from the customs records of the Port of Savannah it is learned that Jacksonville tops all the South Atlantic ports in the matter of foreign trade, and from other figures available is found also to lead in coastwise trade. These figures are for the first five months of 1922.

It is also to be noted that almost one thousand more pupils attended the Jacksonville and Duval county schools during the past term than in 1921, the average attendance for 1922 having been 16,243, while for 1921 the average attendance was 15,478. In this connection, it may be mentioned that the school budget for the coming year will be over \$800,000, an increase over the 1922 budget of \$20,845; \$15,000 of the increase will go toward the salary increase of teachers.

The company's new one-man cars arrived during the past month, and on Sunday, July 23, 17 cars were put onto the Riverside-Main Street line and were operated with much success. On the Thursday preceding the installation of the safety cars on the Riverside line, the city officials were the guests of the Jacksonville Traction Company on a trip to the end of the Riverside line, one of the city commissioners running the car. After the ride a buffet lunch was served at a long table in the car-barn, MR. INGLE acted as toastmaster, and several speeches were made.

MISS OLIVE DAVIS, clerk in the accounting department, and MR. JOHN D. HOMAN, employed in the power station, surprised their friends by being quietly married one Saturday recently, both returning to work the following Monday.

KEOKUK, IA., JULY 25

*Mississippi River Power Company*

MR. C. A. SEARS, manager, who has been laid up for approximately one month with a badly sprained ankle is able to be in the office again.

MR. N. T. WILCOX, sales manager, left July 22 for the East to attend committee meetings of the commercial section of the National Electric Light Association.

The third quarterly meeting of the Meter Committee of the Iowa section of the N. E. L. A. was held in the Keokuk Power station on July 13 and 14, 1922. The following members were present: S. M. COX, chairman; F. D. PAINE, secretary; E. F. MESSEL, vice-chairman; E. F. PRESTON, L. E. STILES and J. L. S. SCADDING. The first afternoon was taken up in general discussions of matters of interest to meter testers in the state; the efficient distribution of the revised edition of the



meterman's handbook; dissemination of the latest meter information from time to time to all metermen in the state; the matter of representation on the National Meter Committee, and many other questions regarding short courses for electric metermen. The morning of the 14th was given over to adopting resolutions concerning matters discussed the previous day and it was voted to hold the next short course for electrical metermen at Iowa State College, March 12 to 16 inclusive, 1923.

In the afternoon a tour of inspection was made of the power house and in the evening some of the members took advantage of a moonlight excursion on the river while others attended a theatre party.

Altogether the members expressed themselves as having enjoyed their visit to Keokuk and that the meeting had been highly successful. It was regretted, however, that some of the members of the committee were unable to attend because of important matters developing at the last minute.

#### *Keokuk Electric Company*

Generally speaking, our industries have been operating on a good schedule and with the exception of two or three have not been seriously affected by the present strike situation. The Standard Four Tire Company, Iowa Fibre Box Company and the lead department of the United Lead Company have been enjoying a better business this month than last year, the first two now running night shifts. The Purity Oats Company have been running since July 17. They are operating their milling department on two shifts, but are operating their packing department only five days per week.

Both the Wabash and the C. B. & Q. freight offices advise that local freight will show an increase over July of last year and although carload shipments have been curtailed especially during the past week or so, they expect their revenue to show a slight increase over last year.

Our wholesalers, especially in the grocery lines, inform us that the month of July, as a rule, is a slack month. They report this month as below the previous year and give as a reason the present strike situation. Our retailers report a fairly good business although not equal to June.

From all indications, we believe our electric department will show approximately the same total figure as for the month of June.

Our gas send-out for the first 25 days of July is approximately 550 thousand cu. ft. over the corresponding period of last year.

With the exception of the buildings under construction which were mentioned in last month's letter, there seems to be little activity in this line. There is some repair work being done. It might be of interest to note that a contract amounting to \$99,000 has been let to a local concern for the construction of a paving between Hamilton and Elveston, Illinois. This strip of paving is to be 4.8 miles long.

The present railroad strike has not effected many men in this locality. The industries have no trouble in securing labor and yet there does not seem to be many people out of employment.

MR. J. L. ALEXANDER, manager, is now at Pinewood Camp, Canton, Maine, recuperating from a recent operation.

MR. and MRS. J. W. KELLY, arrived in Keokuk, July 1, having spent their honeymoon in the East. MR. KELLY at once taking charge of the duties as assistant treasurer.

MR. W. E. DAVIS, chief clerk, has been transferred to Fort Madison, Ia., as assistant treasurer of the Fort Madison Electric Company. On the evening of July 8,

the employees gave a dinner party to Mr. and Mrs. DAVIS at the Hotel Grant in Warsaw.

MR. O. L. REISER, former general clerk, has been promoted to the position of chief clerk.

MR. H. W. SCHELL, gas superintendent, has been transferred to the Haverhill Gas Light Company, Haverhill, Mass., as general superintendent. MR. SCHELL leaves for his new work about the middle of September.

MISS MABEL MILLSPAUGH, telephone operator, returned from her vacation spent in Omaha, Nebraska.

MR. R. E. FLAMBOE, meter foreman, is touring northern Minnesota.

MR. HARDIN TOMLINSON, resigned the position of ledger clerk, leaving July 19 for Los Angeles, Cal., where he will make his future home. MR. H. P. DOCKENDORF has accepted the position of ledger clerk.

MISS GEORGIA M. ENGLEHARDT has accepted a position in the accounting department and for the present is working as railway clerk.

MR. BURTON B. JENKINS, of Pawtucket, R. I., arrived in the city, July 26, to fill the position of gas superintendent.

MISS CATHERINE M. REIDY, secretary to Mr. DAVID DALY, district manager, spent the week of July 10 to 15 attending the National Federation of Business and Professional Women's Clubs at Chattanooga, Tenn. MISS REIDY went as a state alternate, and on her return reported a very successful convention, at which there was present approximately 1,200 business and professional women, representing clubs in practically every state in the Union.

#### KEY WEST, FLA., JULY 25

During the past month the cigar industry has shown a small but steady improvement. Approximately 100 additional cigarmakers were employed during the month. Recent information from the A. Santaella Cigar Company, of Tampa, Florida, states that they would open their branch factory in Key West about August 1, with a force of 150 cigarmakers. It is generally conceded that the cigar industry will continue to show steady improvement the remainder of this year.

Activities in the sponge industry for July were reported as being the best this year. Several large catches were made by local boats which brought the highest prices paid this season.

Wholesale and retailers report a slight increase in business during the past month which they attribute to the improved conditions in the cigar factory.

The railway earnings during July were the best this year. With the increased activities in the cigar factories, we expect railway earnings to continue to show a steady increase during the remainder of the year. Lighting earnings compare favorably with the previous year's earnings and are slightly better than the estimate.

Considerable real estate has changed hands during the past month, the majority of transactions recorded being unimproved property which will be used for residence sites, the construction of which is planned for some time in the near future.

Building activities during July have been a little above normal. Permits issued to date cover seven new buildings to cost approximately \$19,450; five additions to buildings to cost \$5,000 and repairs amounting to \$9,330.

There is still a number of cigarmakers out of employment but indications are that at least 200 will be given employment during the next few weeks.

MR. TALLMADGE CONOVER, student engineer, left Key West during the early

part of the month for his home in Seattle, Washington, where he will spend his vacation.

Mr. J. O. MOSELY, operating engineer at our power plant, was transferred to the Tampa Electric Company on July 13.

Mr. B. L. GROOMS, manager, accompanied by Mrs. Grooms and their two children, left here on the 24th for Miami, Florida. From Miami they will tour the state by automobile and will then proceed to Mr. GROOM's home in southwest Georgia, where they will remain for about a month.

#### LOWELL, MASS., JULY 25

The textile industry seems but little affected by the unsettled labor conditions of the city and most of the mills are running under fairly steady production to fill orders on hand. The Appleton Company is running full, also the Hamilton Company notwithstanding the strike which is still in force among employees of this latter mill. The Massachusetts mills are somewhat affected by strike conditions, but are operating with a force of about 60 per cent of the average number.

Mercantile business is reported as very quiet, due to the unsettled conditions of labor. The Bon Marche Dry Goods Company, reports satisfactory trade, but in general, stores find business very dull.

The business of the company continues to show gains over months in previous year, reflecting the gradual revival from the serious depression in the early part of 1921. The kilowatt load on the station shows a fairly steady demand for power from the mills with increases over 1921.

Appliance sales for the past month showed greater stimulus than for some months previous, reflecting an increase in sales over June, 1921, of 169.

The present demand on the station, the gradual improvement in the mills and steady gain in lighting customers indicates reasonably favorable business for the company during the immediate future.

The number of building permits issued at Lowell City Hall, in June, indicates a slight increase in building activity over the same month in previous year. Total real estate transfers recorded at the Middlesex Registry in Lowell for the month of June, 1922, was 1,090.

At present, labor conditions in and around Lowell are very much unsettled. A strike of the textile workers affecting the Bay State Cotton Corporation, Hamilton Mills, Merrimack Mills and Massachusetts Mills, is at present in force, many of the strikers having been out for six months. The situation seems to have but little effect on the present mill operation, and the strike is being conducted without violence. Mills are operating with all the help necessary and are asked daily by striking employees for permission to return to their old places under the reduced wage schedule.

The railroad strike affecting the Billerica car shops has brought greater disturbance into the territory and there have been several instances of violence in the attitude of some of the strikers toward strike breakers.

Severe thunder storms during June resulted in the loss of several line transformers, damage to power feeders and the necessity of overhauling lightning arresters.

Since the need of more office space had been apparent for some time and particularly more economical quarters for the accounting department, work was started last February on reconstructing the second floor of the office building at 29 Market Street and taking over the third floor which was in an entirely unfinished state. A short description of the completed work may be of interest:

At the top of the stairs leading from the first floor a hallway gives convenient access to the well-lighted accounting department occupying the entire front part of the second floor, while other doors lead from the same hallway to the manager's suite of three rooms in the rear and to the two washrooms.

The third floor has been divided into five rooms—a rest room for the girls with large wardrobe, couch, table and chairs, making a convenient place for luncheons, meetings, etc., also an assembly hall comfortably seating over one hundred persons, to be used for departmental meetings and lectures; an engineering office for the power sales department; a stock room for the printed forms and stationery of the company and an unassigned room now used temporarily by the accounting department.

The L. E. L. Girls' Sewing Club arranged for a "Bacon Bat" on Saturday afternoon, July 8, at Miss WILSON's camp in Hudson, N. H., on the Merrimack River. The affair was carried out with great success and all agreed would bear repeating.

The annual outing of the L. E. L. employees was held Tuesday evening, July 18, at Canobie Lake Park. A severe thunder storm which lasted during the entire evening completely changed the plans of the outing committee; no program for sports could be carried out and the only thing which went through as scheduled was the excellent luncheon provided, most heartily enjoyed by all. Wires down on the street railway system resulted in loss of both lighting and railway service at the Park, the only illumination during the greater part of the evening being a few kerosene lamps and candles in and around the dance hall, so that dancing was the popular and only diversion possible. The special car to take employees back to the city was much delayed, but finally reached Lowell safely. General comment on the outing seemed to be that it was a "moist, yet enjoyable time."

The wedding of Miss MARIE RICHARDSON, for several years clerk for Mr. REED, chief engineer, and Mr. CLARK SPELLMAN, of the engineering office, took place on Wednesday, June 28. Many of the company employees were present at the reception which was held at the bride's home immediately after the ceremony. Mr. and Mrs. SPELLMAN spent their honeymoon at Lake George.

Miss VIOLET BROWN, formerly of the accounting department and Mr. JAMES J. SHEEHAN, paymaster and head billing clerk, accounting department, were united in marriage at St. Columbas Rectory on Saturday, June 24. Mr. and Mrs. SHEEHAN spent their honeymoon at Woodstock, New Hampshire.

Mr. RAYMOND CUSTER, of the commercial department, has returned from a vacation trip.

Miss ALICE JOHNSTON of the commercial department, is on her vacation.

Miss BESSIE BRUNDIN, of the accounting department, is spending her vacation at Beverly, Massachusetts; Miss ELVIRA GIPSON, accounting department, at her former home in Maine; and Miss ADELAIDE O'BRIEN, engineering department, at Atlantic, Massachusetts.

#### MIDDLETOWN, CONN., JULY 27

The condition of local industries as a whole is considerably improved.

There is a shortage of coal in Middletown. To date the railroad strike has in no way affected train service through Middletown.

During the month of July a contract was signed with the River Feldspar and Milling Company to supply them with 300 kva. of electrical energy to be supplied them at primary voltage. All work in connection with this extension is to be completed by August 26, 1922.

Building for the past month has been wholly confined to residential work, there being several new homes under construction.

July 10, the office force had a very pleasant picnic at Guilford Pond. "DREWY", LOHNEISS again proved his ability as chef and prepared a fine lunch. After lunch a very interesting talk was given by Mr. PACKARD upon "Public Relations" after which the party adjourned to the inn and dancing was enjoyed.

July 12, MESSRS. BIRD, TRULL and CURRAN were visitors in Middletown.

July 13, at the weekly meeting of the department heads, Mr. Guy, of Guy & Rice, Middletown, Conn., gave a very interesting and instructive talk on industrial and automobile insurance.

July 25, MESSRS. BIRD, TRULL, KEBBE and CURRAN were visitors in Middletown.

MR. PACKARD is on his annual vacation in northern New Hampshire, and Mr. F. BAKER, of the engineering department in New London, is in Middletown taking care of Mr. PACKARD's work.

#### NEW LONDON, CONN., JULY 22

Local industries are in very good condition. The New London Ship & Engine Company is increasing its number of employees and is working full time. Other industries are on a full time basis. In Montville, a paper mill which has been shut down for the past few years is getting ready to operate again.

The usual influx of summer residents has brought business to the retailers, and in spite of wet weather during the early season the beach stores are reporting good business now.

The earnings of the New London division show an increase over last year in both the electric and gas departments. With the resumption of the local industries which now looks very favorable our business should maintain an increase over last year.

There are several small land developments along the shore.

The Edward Bloom Company, silk manufacturers, are building an addition to their plant in New London. Some few garages are also under construction.

Good labor is very scarce, in fact, it is hard to get common laborers. This condition is caused to some extent by a road construction job which is underway at present. At the railroad shops in Midway part of the men who walked out on strike returned the next day.

#### PADUCAH, KY., JULY 25

Local lumbermen report that the volume of buying continues good for this season of the year and in certain grades the demand exceeds production approximately 20 per cent.

All building trades are working to full capacity and many contractors report trouble in obtaining sufficient help to complete their contracts on schedule.

Cigar manufacturers report business unusually good and say that the demand for the higher priced goods is remaining firm. Several local concerns are advertising for additional help.

There is very little activity in the tobacco market here and the few sales made during the past week were private sales. The 1922-23 acreage of tobacco equals that of 1921 and reports show that conditions are good for a big crop this year.

The Paducah Cooperage Company are building an addition to their plant for the manufacture of kegs. This plant will be in operation probably the early part of August.

The King Mill & Lumber Company are building a new planing mill in connection with their present plant and plans are for electric drive of approximately 30 horse power.

The Paducah Milling Company are now partially operating and expect to be running full force in about a week.

Actual work on the new sewer system will commence next week. Several carloads of machinery have arrived and material is ordered and same is in transit.

The Shelton Bros. Foundry have recently installed some new machinery and are now operating at full capacity. They report orders ahead that will keep them busy for some months to come with repair work locally, as well as contracts on steamboats from other points.

Retail merchants report a gradual tightening up in sales as a result of the strike, but say volume of sales compare favorably with last year.

Wholesalers report a gradual increase in business in outlying territory but say credit in many instances is poor, as a result of the coal and railroad strike.

Several permits for new buildings were recorded for July and many contracts let for repair and remodeling work. Real estate dealers report the selling of several lots in outlying districts to people for building purposes.

Mr. A. S. NICHOLS, manager, was host recently to several of the commissioners who are to decide in which city the new Western Kentucky State Normal School shall be located. Paducah is making a strong bid for this institution.

Mr. ELLIS McNEELY, son of Mr. J. W. McNEELY, railway superintendent, is spending a month at his home in this city. Mr. McNEELY is employed by the El Paso Electric Co., El Paso, Texas.

Mr. E. R. BOATMAN, of the accounting department, is spending his vacation at his home in Houghton, Mich.

Mr. R. A. GORDON, sales manager, and his wife, recently motored to Keokuk, Iowa, where they spent several days.

Mrs. Lawless, wife of Mr. J. E. LAWLESS, master mechanic of the El Paso Railway Co., is a guest at the home of Mr. J. W. McNEELY, railway superintendent.

Mr. FRED CLOEN, general superintendent, has been ill for several days during the month.

Mr. R. A. HAIGH has resumed his duties in the manager's office after a honeymoon of several weeks on the Great Lakes and in Detroit.

The lawns and gardens at the gas plant and car barn are unusually fine this season. The mass of flowers in close proximity to our gas holders is causing a great deal of favorable comment.

The veteran No. 94 of the railway company, the product of an amalgamation of several smaller cars and a rival of the Boston El's snake cars, is resplendent in a new coat of orange paint. It has revived considerable interest in trolley picnics.

#### PAWTUCKET, R. I., JULY 26

Reports regarding the cotton industry show that a greater number of mills are operating than formerly. In fact, we are advised that all mills with the exception of three which were formerly shut down by strike throughout the state are now operating on a curtailed basis. Due to improvement in the cotton situation throughout the state, local manufacturers look for better business in the near future. The nut, bolt and machinery business has improved during the month and indications are that this condition will continue. The silk mills are operating practically at capacity and manufacturers are very optimistic concerning future business.

Local merchants report some improvement in business. While the large number of idle textile workers has produced a falling off in retail business, it is apparent that the effect at the present time is not as great as during the past few months.

The company's business continues to show marked gains over the previous year and a steady increase in output is resulting from new business and increased mill operation.

We have recently connected the Potter Fine Spinning Company who will take about 700 kw. in the next month or so.

We are submitting also a contract to the H. & B. American Machine Company covering all their power requirements, which will be about 350 kw. in excess of present business from this concern.

Residence and commercial business are showing steady gains and we expect this to continue.

There is considerable building going on in the residential sections. Also some manufacturing plants are making extensions. The Solway Dyeing & Textile Company are starting a new manufacturing building and other concerns are making small additions.

The principal item of interest in the labor situation is in connection with the textile strike. The effect of this strike on business is becoming less each month and mills are reporting daily increases in their working forces. At the present time there seems to be no shortage of labor.

The annual outing of the Pawtucket Gas & Electric Club was held Tuesday, July 25, at Rocky Point. This outing was attended by over 900 people, including employees and their families, officials of the company, and guests. The trolleys and automobiles left Pawtucket at 9.30 P.M., arriving in Rocky Point shortly before noon where the program of the day was launched with a series of field events in the ball park. During the afternoon a ball game between the office and gas works teams was played, the office coming out as victors with a 9 to 1 score. A shore dinner, bathing, dancing and rides on the various amusements at the park completed the entertainments for the day.

MESSRS. H. T. EDGAR and RALPH WILLIAMS, from the Boston office, and Mr. WILLIAM's mother; Mr. F. W. EASTON, president of The Pawtucket Gas Company; MESSRS. JOSEPH E. NUTE, F. P. DEXTER, GEORGE L. GILBERT and WILLIAM EAVENSON, of the Fall River Gas Works Company; GEORGE H. PRIEST, of the Brockton Gas Company, also Mrs. Priest and daughter; WILLIAM F. BLISS, chairman and GEORGE A. CARMICHAEL, secretary, of the Rhode Island Public Utilities Commission; MESSRS. C. B. HEALY, LEO YETMAN, Mr. and Mrs. F. K. SIMMONS, Mr. and Mrs. AMOS CHENEY, Mr. and Mrs. W. L. CHENEY, and Mr. and Mrs. CHARLES O'LAUGHLIN, from Woonsocket; Mr. Sullivan, Pawtucket editor of the *Providence Journal* and Mrs. Sullivan and Mr. Costello, reporter on the *Pawtucket Times*. City officials from Central Falls and Pawtucket who were also present included: Frank E. Fitzsimmons, collector of port; Herbert A. Fuller, city clerk and Mrs. Fuller, James G. Connolly, city solicitor; George A. Carpenter, city engineer, of Pawtucket; Charles H. Fuller, chief of the Pawtucket Fire department; J. V. Broderick, town clerk, of Cumberland.

The outing was voted a great success by all present and this success was due principally to the efforts of ROLLIN BUCKMINSTER, president of the club, who was chairman of the reception committee and the general committee, consisting of MESSRS. S. S. MASON and B. P. JENKINS.

MESSRS. GARDNER ROGERS, WILLIAM MCGREGOR, ROLLIN BUCKMINSTER, W. I.

STURTEVANT, E. E. NELSON, E. S. ROBERTS, D. T. LENNON and EDWARD S. ESTY attended the recent Stone & Webster managers' convention held in New London.

GARDNER ROGERS, manager of the Electric Company, spoke before the Rotary Club of Pawtucket at their luncheon on Thursday, June 13, on the subject of "Electric Light & Power Service in the Blackstone Valley."

On Monday evening, June 26, the girls of the organization gave a personal shower for Miss FLORENCE B. BROWN, of the sales department, who was married on Saturday, July 15, to Mr. Earle Phillips, teacher of chemistry in the Central Falls High School.

MR. HAROLD EDLUND, formerly voucher clerk, was transferred to the Fall River Gas Works Company on July 15 where he will fill the position of assistant chief clerk. His place will be filled by MR. WILLIAM WEIR, of the accounting department.

On July 11, MR. ARTHUR C. FREY, formerly of the Providence Gas Company, assumed the position of superintendent of distribution of The Pawtucket Gas Company.

MR. BURTON P. JENKINS, student engineer of the gas company has been transferred to the Keokuk Electric Company, to take the position of gas superintendent.

The girls of the accounting department went on an outing to Newport Beach on Saturday afternoon, July 22.

Business conditions remain much the same although steady gains have been made in the number of operatives returning to work. Many departments, closed down for lack of skilled labor, are operating again, however the strike still continues, and with the coal and railway troubles developing there remains much to be desired.

The silk manufacturers report good orders and the outlook is very encouraging. The cotton goods market report an increase in price, but orders are for small quantities. The worsted and woolen concerns report very excellent conditions, everything considered. A strong demand for fancy textiles makes this line very active.

Wholesale and retail merchants report a slight increase in volume of business, but far from being satisfactory.

A demand for electric power from new concerns and a considerable increase on the part of some of the older concerns, will show an increase over last year.

The real estate market is very active and building operations are fully 80 per cent better than last year, although high price for labor and material militates very much against maximum building.

Labor is fairly well employed notwithstanding the strike situation, and, as the result of court action against picketing, many strikers are returning to work.

#### PENSACOLA, FLA., JULY 24

Local industries are continuing to show activities and the prospects for future business is very bright.

Ferris-Lee Lumber Co. which operates on electric power is installing a large dry kiln and will greatly increase the capacity of their plant preparatory to entering the export trade for dressed lumber.

The Bruce Dry Dock Co. is advertising 20 year 6 per cent bonds for public sale in an endeavor to clear up the indebtedness to the Shipping Board and remove the dock from partial Shipping Board control. In their publicity matter they show earnings for the past two years of an amount well above interest on the proposed bond issue. The docks are quite active and are filling a long felt want in this port.

The Pensacola Creosoting Co. has completed the construction of their creosoting



plant and is operating full time. They have several large orders for creosote material, most of which is destined for northern parts of the country.

Conditions in the surrounding country continue to show improvement and wholesale business as a result is satisfactory. The high price of turpentine is bringing about considerable operations in naval stores and is resulting in re-opening of numerous naval stores commissaries which have remained practically closed for sometime due to discontinuance of operations and low prices.

There is no change in retail business conditions. Merchants report fair summer trade, but hardly as good as was expected, even for this dull season. We consider the condition of retail business houses, from a financial viewpoint, satisfactory. A number of changes in location of prominent houses is being made during the dull season of the summer and each change is to a better location and to improved quarters.

The condition of the company's business is far more satisfactory than it has been for many months and the outlook for the future is even brighter. Railway passenger receipts are picking up and are augmented by a splendid freight business which has the effect of increasing balance after operating expenses. Light and power gross holds its own with reduction in operating expenses affecting a greater balance and more satisfactory general conditions. Our contract with the Naval Air Station for a monthly consumption of over one hundred thousand kilowatt hours has been signed and they will come on our line about August 1.

The month of June was the best month in the history of the company from the standpoint of balance after operating expenses, and the remainder of this year should show up equally as well on an average.

Eight Birney cars will be received and put in service in August and should bring about an increase in passenger revenue plus the usual reduction in operating expenses.

Freight business for the month of July is slightly off from our expectations due to the fact that one large contract at the Naval Air Station has not yet been commenced.

Real estate deals in the city at this time are minor in extent and consist principally of small transactions for residence lots. New residences continue to go up all over the city and the situation in this respect presents a rather healthy outlook.

Work on the Gulf Beach Highway and other paving construction is progressing satisfactorily and the commissioners are contemplating further contracts very shortly.

The strike at the Louisville & Nashville shop is affecting labor conditions very noticeably. No indications have appeared of other unions joining in this strike, but all of them are active in expressing, publicly, sympathy with the railroad men. Unemployment conditions were serious even before this strike and a walkout of 500 men in a city of this size makes a very noticeable impression on general conditions.

Mr. F. W. Turner and Mr. Carleton Turner, of Cambridge, Mass., father and brother, respectively, of Mr. FRANK B. TURNER, of this company, have been visiting in Pensacola since July 4.

During the past month the office organization accompanied by all department heads and families have enjoyed two splendid outings at Saufley Beach on Santa Rosa Island. A chartered boat has been secured on each occasion which left the city about 6 P. M. for this splendid new swimming resort on the Gulf of Mexico. These outings have been greatly enjoyed and it is planned to repeat them frequently during the warm weather.

MISS AGNES KERLE, of the accounting department, will be married in August to Mr. Tom C. Rogers, of Jacksonville, Fla. Miss KERLE is the daughter of Mr. ARTHUR L. KERLE, who has been lighting bookkeeper for this company for many years.

MR. O. E. RAYNE, cashier, is spending his vacation in North Carolina.

MR. F. F. CHRIS, commonly known as "Punch" who has been with this company for about fifteen years in various capacities in the lighting department, and more recently as meter reader, where he made an unexcelled record, is leaving the employ of the company on August 1 to enter the dairy business. His departure is very much regretted by all of his associates and the company officials who realize that his successor in this important position will have his hands full handling the work as successfully as "Punch" did. His successor will be Mr. LEWIS MAYGARDEN, who was conductor on the cars for a number of years and who possesses qualities similar to "Punch" in making friends.

#### PONCE, P. R., JULY 24

This is a season of very little activity in the industrial and commercial conditions of the island, as both sugar and coffee gathering for the season usually close in the early part of June and begin again sometime during September. Tobacco factories in Ponce are doing practically nothing with the exception of sorting and packing of cigars manufactured at some of the smaller places around the island in the vicinity of Ponce.

On account of being the closed season for sugar, coffee and tobacco, the general wholesale and retail business is always on the decline at this time of the year, and this year it is especially low on account of the severe drought which has been prevalent, although the wholesale dealers in both sugar and coffee are doing a little exporting at this time.

In the real estate business there is practically no activity whatsoever, although several buildings which have been under construction for some time are being continued to completion. There are a few small residences being built however, but the general tendency is for those people who live in rented homes to move from the more expensive to the smaller houses where their expenses will be reduced as much as possible. This same tendency seems to prevail not only in the renting of homes, but in all purchases of necessities.

There is very little change in the labor situation, although some labor can be secured at prices a little under what they were two or three months ago.

During the past few weeks there have been quite a number of very refreshing showers, which have helped considerably the crops which have been planted. Although these showers have done some benefit, there has been no continued rain which would give the soil the moisture it requires and fill the rivers to the extent that the water from the river can be used for irrigating purposes. Neither has the river been filled sufficiently to aid us materially in our using water for condensing purposes at the power station.

July 4 was very quiet this year in Ponce, as many of the residents went to San Juan where an elaborate parade and other activities were given throughout the day.

The Ponce Electric Company has started the construction of its new trolley home on the Vigia, which is a new residential section being built on the hills about half a mile north of the city proper, and should make a wonderfully cool location for a residential section. The home is to be constructed of concrete and will be sufficiently large to care for all the American employees of the Company.

RENO, NEV., JULY 25

There has been no decided change in the condition of local business houses. Business continues to be quiet, as is to be expected for this time of year, but is in what may be considered a healthy condition. The summer race meet, which has just been concluded in Reno, has had the effect of retarding retail business to a noticeable extent, but the business men expect that this will be off-set by increased activity during the next month or two.

The United Comstock Mines Company, which is engaged in constructing a large mill on the company's system is rushing its construction work, and it is now the expectation that ore will begin to be mined and crushed by September 1 and that the mill will be operating by the middle of September.

During the past month the Standard Oil Company has announced two reductions in the price of crude oil, each of 25 cents per barrel, and in addition, a reduction in freight rates during the past month has resulted in an additional reduction of ten cents per barrel in the cost of oil delivered in Reno.

During the past month, a consolidation has been completed, under which two large groups of mines in Virginia City have been combined under the name of the Comstock Merger Lines Company. It is reported that the consolidated company will proceed with mining development, and if warranted, will operate the property on a large scale.

As is usual during the summer months, the real estate market is dull, with few transfers of property. However, an unusual amount of building is being carried on in Reno, Sparks and Virginia City, including a large addition to Reno's principal hotel, made necessary by the destruction of the Riverside Hotel some months ago.

During the past month a shortage of laborers who are willing to work on ranches has begun to be felt. In one district, the labor situation is so unsatisfactory that there is serious discussion going on as to the advisability of cutting the second crop of alfalfa. Within the past few days, this shortage has been to some extent relieved by the striking railroad shopmen, who in considerable numbers, have gone into the hay fields, pending some decision of the railroads strike.

Miss HELEN HARRIS, ledger clerk, is resigning as of August 1 to be married. Her sister, Miss CAROL, is to fill the vacancy.

Mr. ODAMS, ledger clerk, and Mrs. Odams have just returned from their vacation spent in Yellowstone National Park.

Miss VERA RIES, engineering clerk, is now spending her vacation in California and expects to return by the first of the month.

Mr. H. H. CARPENTER, water and gas superintendent, has purchased a new bungalow in anticipation of his marriage in September.

Mr. JAMES RICE, gas fitter in Sparks, is being congratulated on the birth of a son.

Mr. WENTWORTH and Mr. DON BARTLETT were at Lake Tahoe during the month as members of the Reno Golf Club's team, to participate in a tournament at that place. Mr. WENTWORTH won a small cup for having the *highest* individual score.

The following members of this organization recently joined the Reno Golf Club: Mr. CLIFFORD, Mr. CARPENTER, Mr. CAMPBELL, Mr. MASON, Mr. FAIR and Miss MYRTLE CAMERON.

Mr. CHARLES HICKS is at present spending his vacation at Donner Lake, California.

The company held its annual picnic on the 22nd of this month, at Lake Tahoe. All of the employees who could possibly be spared, attended some leaving as early as five o'clock in the morning, while the majority were a little more conservative and

left between seven and nine. It was originally intended that all athletic contests would be held before lunch, but so few arrived before that time, the contests were postponed until the afternoon. The events were as follows: horse shoe throwing contest, won by Mr. WENTWORTH and Mr. COOMBS; boys' race, won by Phillip Wentworth, Mr. WENTWORTH's oldest son; girls' race, won by Miss Elsie Seaborn daughter of Mr. E. J. SEABORN; shot putting contest was won by Mr. WENTWORTH; broad jump, won by Mr. CLIFFORD; rowing contest, won by Mr. CARPENTER and Mr. MASON; cracker eating contest for the ladies was won by Miss Roberts. A number of the picnickers went in swimming but the water was too rough to hold a swimming race. After these contests, supper was eaten and then a majority of the employees went to Homewood, a resort on the lake not far from the picnic grounds and danced until an early hour. The picnic as a whole was a great success.

#### SAVANNAH, GA., JULY 25

The industrial depression in Savannah continues and no marked improvement in the unsatisfactory situation was in evidence during the month. This depression does not affect the Sugar Refinery which has continued its operation at capacity receiving a steady shipment of raw material.

The shipping industry in Savannah continues active and the total net tonnage of all vessels entering the port of Savannah for the first six months of 1922 was considerably larger than for the corresponding period of 1921.

Although June was not an unusually good month as far as cotton exports go, the general volume of business has been maintained.

Shipments of lumber from this port are far in excess of those of the previous season. Since September 1, 1921, a total of 50,581,000 feet of lumber has been shipped from Savannah, of which amount 6,914,000 feet were shipped to foreign ports.

The cotton and naval stores markets continue steady, the price of cotton showing but slight change. The turpentine market is still firm, but there has been a sharp decline in the price from the high quotation of a month ago. The first bale of cotton for the 1922-23 season was sold at auction in Savannah on July 19. This date is in comparison with July 26 last year and August 4 in 1920.

Birney safety cars have been operating successfully on the Habersham Street line since July 5 and have resulted in an increased number of passengers on that line, but a certain portion of the increased riding has been taken from other lines.

Representative architects and contractors of Savannah report the outlook bright and believe that the building activities which have been good during the first half of the year will continue steady and satisfactory during the last six months of the present year.

The figures for the first six months of 1922 show that 346 permits were issued valued at \$1,037,300 in comparison with 354 permits issued during the first six months of 1921 valued at \$746,040.

With the exception of the strike of the railway shopmen, there has been no noticeable change in the local employment situation. Labor of all classes continues to be plentiful with the possible exception of skilled workmen in the builders trade.

MR. F. M. MARTZALL, purchasing agent, recently made a week end visit to his home in Jacksonville, Fla.

MR. P. E. SEAWRIGHT, of the engineering department, is spending a month's leave of absence in the mountains of North Carolina because of his health.

Miss LUCIA SMITH, clerk in the billing department, has returned from her vacation.

Mr. C. W. EDWARDS and Mr. BAY HARRISON, superintendent of transportation and claim agent, respectively, of the Tampa Electric Company were recent visitors in Savannah.

Miss MARGARET REYNOLDS, clerk in the billing department, has returned to her desk after a serious illness of several weeks.

There was a large attendance at the July meeting of the Savannah Electric Benefit Association, which was held at the Casino at Thunderbolt. At the close of the business session, a very pleasant entertainment was given after which dancing was enjoyed.

Two electrically operated track switches have been installed on our lines at Bay and Whitaker Streets. Practically all of the cars in operation pass over these switches.

Mr. MALCOM MCKENZIE, foreman of the meter department, has returned from an enjoyable vacation in Florida.

Mr. FRANK HEYWARD, salesman, has returned from a pleasure trip to Baltimore and Washington, D. C.

Mr. and Mrs. W. M. BIRD announce the birth of a daughter, Mary Harriet, on June 13.

Mr. J. F. RABEY entered the service of this company as assistant paymaster, succeeding Mr. B. CHILTON, resigned.

The following members of this organization have returned from the two weeks' encampment of the local National Guard at Camp Bragg, North Carolina.

MESSRS. C. P. FIGG, A. F. CORDES, L. E. CROSBY, F. S. THORNTON, D. H. BENTON, L. C. KITCHENS, J. COLLINS, RALPH STOW and J. MILLIKEN.

Mrs. ANNIE WELLS, telephone operator, has returned from her vacation. In her absence, her position was filled by Miss CATHERINE CULLUM.

Mr. E. T. SMITH, master mechanic, made a brief business trip to Jacksonville, Fla., during the month.

On July 23, about twenty-five members representing all departments enjoyed a deep sea fishing trip to the Black Fish Banks. Very good luck was reported with a catch of over 600 fish.

Among those who are now away on their vacations are: Mrs. JAMES McCABE, Miss A. McCABE, and Mrs. NANTZ.

The introduction of the new Birney safety cars on our lines occurred on July 5. The occasion of the inauguration of these cars was celebrated by inviting the Mayor, the City Council, County officials and the heads of civic bodies to lunch. The guests boarded the new safety cars at the City Hall and were taken directly to the Riverside Power Plant, where a buffet luncheon was served in the boiler room immediately in front of the boilers. Many expressions of surprise and commendation were received from the guests at the neat and clean appearance of the plant and yard, and the cool, comfortable condition of the boiler room through which a brisk breeze was blowing. The tables were arranged in front of the boilers and decorated with bouquets set in high tension insulators as vases. The luncheon was served by the young lady employees of the office force. After being shown the operation of the oil burners by the white clad firemen, the party again boarded the cars and were taken over the Habersham Street line. Safety features of the cars were pointed out to the guests and the Mayor and a few of the County officials were allowed to operate them for a short distance. A demonstration was also given with a dummy showing the operation of the life guards.

SEATTLE, WASH., JULY 23

Lumbering continues excellent. There was the usual Fourth of July depression, but the mills recovered more quickly than usual and are now running normal, with the forest fires a slight handicap. The number of mills putting on two shifts is increasing.

Fishing conditions continue quiet, the halibut industry being the only one that is running about normal.

Small fruit farmers are having an excellent year; there has been a shortage of pickers, however, and the dry weather has somewhat reduced the quality and quantity of the pack.

The coal mines are running, but the coal retailers are experiencing a very light summer, probably due to the abnormally dry weather. The coal strike is not affecting us to date and the railway strike has affected us but slightly.

Wholesale business picked up during the month, wholesale buying showing quite a pronounced increase over last month and over the corresponding period last year. Retail business is holding up well, considering the usual summer depression.

The company's business showed a fair increase for the month and indications are that business will continue good during the fall.

Real estate is quiet and very much below normal, very little trading taking place. Building activities are unusually good and are improving steadily. For the first half of this year, approximately \$10,000,000 worth of building has been done, which is a record with the exception of 1909, the year of the Fair. Permit for a \$2,500,000 bank building was issued during the month and the community hotel, over which so much discussion has taken place was finally financed, over \$2,900,000 having been subscribed to date for this project.

Labor conditions in this district are excellent. There is an actual shortage of labor for lumbering and for berry picking. There is practically no surplus labor in Seattle, except the regular group of idlers who do not wish employment.

The northwest section of the National Electric Light Association met in convention at Boise, Idaho, on June 7 to 10. These attending from the Seattle division were MESSRS. QUINAN, BROWNELL, GILLE, SEARS, SNOW and McPHERSON. These members report that the convention was unusually well attended and the meetings very satisfactory.

A standardization meeting of the division engineers, storekeepers and purchasing agents was held in Bellingham July 12 and 13. From Seattle, MR. QUINAN, MR. CRAWFORD, MR. HOHE, MR. RIGGS, MR. LINDSAY and MR. RUPPE attended. MR. QUINAN acted as chairman. This is the third meeting of this committee and they report that they are accomplishing a great deal in the way of standardization for our Northwest companies. Not only was the meeting a success from a business standpoint but Bellingham entertained the visitors by taking them into British Columbia one afternoon and evening.

MR. NEILL and MR. OWERS, of the Boston office, with their assistants, are auditing the company's books.

MR. F. W. BROWNELL attended the opening of the Pacific Northwest Traction Company's new depot in Bellingham.

Formal opening of the vacation lodge at Lake Tapps took place on July 16, with an attendance of approximately five hundred employees. Everyone seemed very much impressed with the Lodge and those who had not previously been up, were astounded at the progress made in the short time the Lodge was under construction. MR. LEONARD officially presented the Lodge to the employees; MR. WM.

DICK, as chairman of the employees' committee, accepting on behalf of the employees. There were swimming races and dancing during the day and everyone returned very much pleased. Reservations have already been made for practically the full capacity of the Lodge for the regular vacation period of the summer.

SYDNEY, N. S., JULY 24

Principally on account of the coal strike in the United States, the Dominion Coal Company, Limited, and the Nova Scotia Steel and Coal Company, Limited, subsidiaries to the British Empire Steel Corporation, Limited, have been finding a greater demand for coal. This demand has come principally from Montreal, Quebec and other St. Lawrence ports. During the War, coal from the United States was shipped to the St. Lawrence ports where Cape Breton coal had formerly been generally used and it has been rather a hard fight for the Cape Breton Coal Companies to regain these markets. If the strike in the States lasts much longer and the coal companies here are not tied up through labor trouble, there seems every reason to believe that Cape Breton will shortly resume her old position of importance as regards sale of coal to Montreal, Quebec, etc. At the present time, coal is being shipped to Montreal at the rate of 21 cargoes per month and it is predicted that 1,500,000 tons will have been shipped up the St. Lawrence before navigation closes. the best pre-war record having been 2,000,000 tons in one year. Considerable coal has recently been shipped to New England ports and if the strike in the States continues much longer this business may increase. On the other hand, very little coal has been sent to Newfoundland, since it is claimed that English coal can be landed there for as low as \$4.00 per ton, which is \$2.00 per ton cheaper than coal is sold here in Cape Breton.

The plant of the Dominion Iron & Steel Company, Limited, in Sydney, has been increasing its output gradually, particularly products of the rod, wire and nail mills. One blast furnace is now in operation and several open hearths.

The British Empire Steel Corporation now have twelve steamers engaged in carrying ore from their mines at Wabana, Newfoundland, to Germany and shipments are being made at the rate of 10,000 tons per month. It is expected that three quarters of a million tons will have been shipped before the end of the season. Although this business does not directly benefit Cape Breton, still any profit made will help the British Empire Steel Corporation and thus benefit Cape Breton plants.

Business has continued quiet throughout June and the early part of July. At the present writing there seems to be a considerably more optimistic feeling on the part of both wholesale and retail merchants. More men are now employed at the Steel plant than any time for a considerable number of months and since the coal business is steadily improving, more men will be employed there.

In spite of daylight saving time having been effective in Sydney since May 15, 1922, earnings of our light and power department as a whole have remained practically the same as last year. Some falling off due to the present business depression has been offset by increased business due to the steadily increased number of customers.

A new street lighting contract with the city of Sydney became effective June 1, under which an all night, every night schedule is provided instead of the moonlight schedule which was furnished under the old agreement.

There had been a very considerable amount of residential building done during the summer months. In June alone the number of houses for which permits were taken out was equal to the total number taken out in the first six months of 1921

and exceeds the latter in value by something over \$6,000. The construction of 42 houses has already been authorized in 1922, as compared with a total of 38 actually built during the full season of 1921.

The local Housing Commission, which works in conjunction with the Provincial Government, has already approved 51 applications for loans up to the end of June. Of these, 24 have been ratified and approved at the office of the Director of Housing in Halifax and between 15 and 20 houses are now in course of construction.

A mass meeting of miners, held in the Savoy Theatre in Glace Bay, yesterday, July 23, passed a resolution demanding that the District Executive Board of the United Mine Workers, take immediate steps to enforce the 1921 rates of pay in all the collieries comprising district No. 26 and make those rates retroactive to January 1, 1922, or else the miners would cease work on August 15. All local Unions comprising district No. 26 were requested to support this resolution and demand the 1921 peak wages or else call a strike. At the present time the miners are working at considerably reduced wages without any agreement. There seems to be a decided probability that further labor troubles may develop.

Approximately three thousand men are now employed at the Dominion Iron & Steel Company, Limited plant in Sydney as compared with about twelve hundred the first of April.

MESSRS. WILLIAMS and SHERBURNE, of the Boston office, have completed an audit of the books of this company and returned to Boston.

MR. CECIL M. BATSTONE, formerly with the Nova Scotia Steel and Coal Company, Limited, Sydney Mines, entered our employ and will take charge of the Sydney Mines Branch Office.

MR. CHARLES H. RUDDERHAM recently entered our employ as cashier of the Sydney Branch Office.

MR. EBEN O. SMITH, assistant railway superintendent and family have returned from a vacation spent in Halifax and vicinity.

MR. P. R. WILLIAMS, auditor, was the guest of honor at an outing held at Westmount, by the general office staff, on Monday evening, July 17. Salt water bathing was enjoyed by a number of the party, after which a dainty supper was served by the ladies.

MR. C. C. CURTIS and family recently motored to Margaree and while there enjoyed some good fishing, being successful in landing three salmon.

MR. R. H. MILLER, of the light and power department, has returned from a vacation which he spent with his parents at Windsor Junction, Nova Scotia.

#### TACOMA, WASH., JULY 24

Lumber production in the Northwest for the first six months of 1922 was 68 per cent above production for the same period last year and new business has exceeded the 1921 sales by 56 per cent.

Reports from department stores and bank clearings agree on the fact that there is a healthy increase in most lines of business for the first half of July.

There has been a heavy tourist travel through the state via motor, which reflects in heavy sales of gasoline and lubricating oils, accessories, etc, by local merchants throughout the state.

Twenty-five hundred sailors, now having shore leave from the two dreadnoughts and seven destroyers in the Tacoma harbor, will have an effect on city line and interurban earnings. The fleet arrived the 21st and will remain here for several weeks, being then replaced by others.



The weekly pass for \$1.00 went into effect this morning on the lines of these companies within the city limits. The interest being shown in this pass by the riding public and by employees has been greater than we anticipated, and the first week's report will, we believe, be more than satisfactory.

The Puget Sound Power & Light Company, Tacoma division, reports continued increases in lighting extensions to suburban districts and it is believed this business will continue to increase. With the coming back of copper business, which is expected shortly, and flour business continuing good, Puget Sound Power & Light Company receipts will show a very good increase over 1921.

There is a shortage of labor in the building trades.

Waterfront conditions with reference to labor are exceptionally good.

The strike of the railroad shopmen has not halted coal production or interfered with lumber and shingle manufacturing to any extent. The output of the largest single group of non-union mines in the state has reached 23,000 tons per week and there has been a summer cut in price of 50 cents per ton to consumer, to stimulate distribution.

MR. R. C. SAUNDERS, sales manager, with his family recently motored to the Oregon beaches.

MR. M. G. CUSHING, solicitor in the sales department and Mrs. Cushing are on a two weeks' trip via motor boat.

MR. K. C. SCHLUSS, superintendent of power and equipment, MR. G. O. SNIDER, purchasing agent, MR. GEORGE LEVENHAGEN, storekeeper and MR. C. A. MILLER, superintendent of distribution, were in Bellingham in July to attend the third meeting of engineering and purchasing departments of the Stone & Webster, Inc. properties in Washington in connection with standardizing of material used for line construction.

MR. GEORGE W. ROUNDS, general superintendent of transportation, recently spent the week end at the mountain.

COL. H. G. WINSOR has returned from a two weeks' camp—having been in command of the annual camp instruction for the National Guard of Washington. There were 150 officers and 2,500 enlisted men in camp.

MR. C. V. ALLEN, land and tax agent, accompanied by Mrs. Allen, are planning to motor to California late in July.

MR. J. E. O'BRIEN has been appointed safety engineer, as of July 15, 1922, taking over the duties of MR. C. PAUL BATES, resigned. MR. O'BRIEN was formerly with these companies in the claim department and left us in 1917 to join the engineering corporation at Hog Island.

The seventh annual picnic for employees will be held at Spanaway Park on Wednesday afternoon, July 26.

The Puget Sound Power & Light Company has opened an office in Sumner to handle sales, collections, etc. Summer business has heretofore been handled through the Puyallup office, but due to increased business, an office was established there.

#### TAMPA, FLA., JULY 21

There has been considerable improvement in the cigar industry. The output for the year ending June 30, 1922, has been at the rate of 1,000,000 cigars per day and we are advised that this figure will be greatly exceeded for the next several months in preparation for the Christmas trade.

Fertilizer factories have shut down until the fall season opens.

In the citrus industry large prices are already being received for future crop and an excellent year is looked forward to.

The Exchange National Bank, which does a large business with the local jobbers, reports that the jobbing business is very dull at this time, but shows some signs of picking up. The First National Bank expresses the opinion that retail business is extremely dull.

There seems to have been a slacking up in the building activities, which are now confined largely to small dwellings.

Considerable interest in radio has been evident among company employees. A good receiving set has been installed at the car house by the mechanical department; Mr. JAMES TROTTE, of the lighting department is building a set for Mr. AYALA's residence and Mr. JOHN J. FOGARTY, who was a wireless operator of the Navy Department during the War, has an excellent installation at his home. The *Tampa Daily Times* has erected a broadcasting station on top of the Citrus Exchange Building, known as "WDAE," local musicians and speakers furnishing the programs.

On July 12, the Benefit Association gave another well-attended dance in the assembly hall at the car house.

The new brick oil storage house at the car barns has been completed.

It is with deep regret that we announce the sudden death of Flora, daughter of Mr. and Mrs. ARTHUR DERVAES, of Ballast Point Park.

Mr. ROBERT L. SWITZER, of the transportation department and Miss Eva Haager were married during July.

Mr. CHARLES T. LYLES, a graduate of Georgia School of Technology, has entered the employ of the company in the company engineer's office.

Mr. B. M. HARRISON, claim agent, and Mr. C. W. EDWARDS, superintendent of transportation, visited Jacksonville and Savannah for the purpose of studying safety methods used by these companies.

Effective July 7, Mr. C. A. R. KURTZ was transferred from the engineer's office to the master mechanic's; Mr. HARRY WELDON, JR., from the latter office to the stores department and Mr. GILBERT CURTIS, of the lighting department to the engineer's office, in order to familiarize these members of the organization with various branches of company work.

Mr. L. J. TOWNE, of the Boston office division of engineering and construction, arrived in Tampa during July to take charge of the erection of the new Exchange National Bank building.

#### WOONSOCKET, R. I., JULY 24

No apparent change has been noted in the cotton industry during the past month, local operations remaining dull.

The majority of the woolen and worsted industries are running on normal schedule. The Nyanza Mills have closed their plant for a week due to lack of orders.

The machine industry still continues dull.

The local lumber companies report business as good, due to the considerable amount of building in progress.

Retail merchants report business quiet.

Our present customers are not using power up to normal amounts, due to the business depression, but we expect that this situation will soon be bettered.

Contract has been signed with the Rathbun Knitting Company for 275 kva.,

this being an increase over their present load of about 100 kw. Contract has also been signed with the Peerless Dye Company for 75 kw.

Considerable building is in progress in our territory, there having been 73 building permits granted during the month of June at an estimated value of \$279,720.

The Eastern Construction Company has practically completed its task of clearing the fire wreckage from the site of the burned Crowell Building on Main Street. Walter D. Brownell, proprietor of the site is planning to erect a new business block consisting of three stores, with a large basement and will contain one very large and two smaller stores on the street floor. The two upper floors will be devoted to offices.

The Buell Building, which was also destroyed by fire, is being rapidly put into shape. Plans are now being drawn for the building of a three-story factory structure to house the *Woonsocket Call's* mechanical departments. After this is completed, the Buell Realty Company will erect a four-story office building connected with its mechanical departments.

MISS DOROTHY L. BROWNING has been transferred from the accounting department to the purchasing department.

Rapid progress is being made on the roof of the Buckland and Clark Building, which was recently destroyed by fire. This is the building in which our No. 2 station is located.

MR. ALBERT E. CAMPBELL, of our electric meter department, was married on June 15, to Miss Anna Robbins, of Elmdale, Mass.

MR. E. L. MILLIKEN, assistant manager, accompanied by his family, is spending his vacation in Sydney, Nova Scotia.

The Woonsocket Gas and Electric Employees' Club, accompanied by their families and friends, held their fourth annual outing at Lake Pearl, July 19. The party left Court Square at 9 o'clock in the morning on four special cars, in addition to a number of automobiles. On arrival at the Lake, the members of the party proceeded to enjoy themselves in the grove and on the water. The children were kept happy with free rides on the motor boat and merry-go-round.

Races of various kinds provided sports for those inclined to athletics, for which prizes were donated by the company. At noon, a basket lunch was eaten in the dining pavilion, ice cream and coffee being served by the committee in charge. Luncheon was followed by a baseball game between the married and the single men. The latter emerged victorious. Later, water sports were held, consisting of canoe and swimming events. The special cars returned to the city at 6 o'clock, but a number remained for the dance in the evening.

MR. M. L. SPERRY and MR. RALPH WILLIAMS, of the Boston office, as well as several members of the Pawtucket division were guests of the day.

## Library Notes

### Surplus and Superseded Literature

The following books we have recently removed from our shelves, in order to make room for others. In many cases they are still of considerable value, so that members of the office may want to recommend that some go back to the shelves or may want to keep them in their own rooms. The majority, however, will probably be available for whom they may concern and on terms not to be found fault with.

#### 1. ELECTRIC RAILWAY AFFAIRS

- ARNALL, THOMAS: Permanent way for tramways and street railways. London, 1905.
- ASHE, S. W.: Electric railways theoretically and practically treated Vol. 2, Engineering preliminaries and direct current sub-stations. 1907.
- FOWLER, G. Z.: The car wheel; giving results of a series of investigations (Schvem Steel Wheel Co. publishers). 1907.
- PARHAM & SHEDD: Shop tests on electric car equipment for inspectors and foremen. 1909.
- UNION SWITCH & SIGNAL Co.: Railway signaling; a comprehensive treatise on modern methods of railway signaling, covering principles of operation and types of apparatus. Written by a staff of expert signal engineers. 1908.

#### 2. STEAM ENGINEERING

- BARRUS, G. H.: Engine tests embracing results of over one hundred feed-water tests and other investigations of various kinds of steam engines, conducted by the author. 1901.
- COLLINS, H. E.: Knocks and kinks: causes, detection and cure for many of the commonest troubles of the engine-man; plain directions for prevention and remedy. 1908.
- DARLING, P. G.: Safety valve capacity. Paper read before American Society of Mechanical Engineers, 2/23/09. Issued by the Consolidated Safety Valve Company.
- HABER, DR. F., and LAMB, ARTHUR B.: Thermodynamics of technical gas-reaction. Seven lectures by Dr. F. Haber. 1908.
- HUMPHREY, HERBERT A.: Power-gas and large gas-engines for central stations. 1901.
- NEILSON, ROBERT M.: Steam turbine 4th ed. revised and enlarged. 1908.
- THURSO, J. W.: Modern turbine practice and water-power plants. 1905.
- WYER, SAMUEL S.: Catechism on producer gas. 1906.

**3. ELECTRIC ENGINEERING**

- BARROWS, W. E.: Electrical illuminating engineering. 1908.  
 GEAR & WILLIAMS; Electric central distribution system. 1911.  
 KAPP, GISBERT: Transformers for single and multiphase currents; a treatise on their theory, construction and use. 2d. ed. 1908.  
 TREADWELL, AUGUSTUS: Storage battery; a practical treatise on the construction, theory, and use of secondary batteries. 1898.  
 THOMPSON, S. P.: Polyphase electric currents and alternate motors. 1900.

**4. CONCRETE**

- AMERICAN STEEL & WIRE COMPANY: Handbook and catalogue of concrete reinforcement. 1908.  
 AMERICAN STEEL & WIRE COMPANY: New York City triangle mesh concrete reinforcement; being reports of various tests made for the City of New York. 1910.  
 ANDREWS, H. B.: Practical reinforced concrete standards for design of reinforced concrete buildings. 1st ed. 1908.  
 ATLAS PORTLAND CEMENT COMPANY: Concrete in railroad construction; a treatise on concrete for railroad engineers and contractors. New York.  
 BRAYTON STANDARDS: A pocket companion for the uniform design of reinforced concrete.  
 BUEL and HILL: Reinforced concrete. 1906.  
 COLLINS, H. E.: Erecting work; foundations, moving and erecting heavy machinery; knots and hitches. 1908.  
 GILLETTE and HILL: Concrete construction methods and costs. 1908.  
 MARSH, CHARLES F.: Reinforced concrete: with 512 illustrations and diagrams. 1904.  
 MÖRSCH, EMIL: Concrete-steel construction. Authorized translation from the third (1908) German edition.  
 REID, HOMER A.: Concrete and reinforced concrete construction. 1907.  
 TURNEAURE and MAURER: Principles of reinforced concrete construction. 1909.

**5. MISCELLANEOUS**

- ABBOTT, ARTHUR V.: Telephony. Part 11. Construction of underground conduits, with 62 illustrations. 1903.  
 BERNTHSEN, A.: A text book of organic chemistry. Translated by George M'Gowan. ed. 3. 1897.  
 BJÖRLING and GITTING: Peat, its use and manufacture. 1907.  
 THE FIDELITY and CASUALTY Co. of New York: The prevention of industrial accidents. No. 1. General pamphlet. Prepared by Frank E. Law and William Newell. 1909.

- FOURNIER, E. E. (d'Albe): The electron theory. A popular introduction to the new theory of electricity and magnetism, with a preface by G. J. Stoney. 1909.
- GILBRETH, FRANK B.: Field System. Directions for foremen and superintendents on construction and engineering work. 1908.
- MAVER, WILLIAM: Wireless telegraphy, theory and practice. 1904. The Independent Long Distance Telephone Association. General specifications for long distance pole lines.
- MCGRAW-HILL BOOK CO. (Pub.): Technology and industrial efficiency; a series of papers presented at the Congress of Technology opened in Boston, Mass. April 10, 1911.
- SABIN, A. H. and OTHERS: Application of paints, varnishes and enamels for the protection of iron and steel structures and hydraulic work. 3rd. ed. enlarged. 1895.
- POINCARÉ and VREELAND: Maxwell's theory of wireless telegraphy. Prt. 1. 1909.

*Sponsors for Knowledge.* The American Library Association intends to establish the sponsorship system this coming year; but, for the period ending December 31, 1922, it will look to the "Extension Service," whose headquarters are at the Public Library, Boston, for trying out the system locally. The "Extension Service" works in co-operation with the Library of Stone & Webster.

*Colorado Engineer for May 1* contains alumni directory for 1897 to 1922 for the College of Engineering, University of Colorado. It is our intention to learn the whereabouts of alumni directories for many colleges, and this rounding up is likely to prove one of the first enterprises of the Community Catalogue, which is about to be established.

*Water Resources Index Inventory Filing System for Recording, Collating and Analyzing Water Resources Data* is a publication of the Department of the Interior, Canada, Dominion Water Power Branch; being Water Resources Paper No. 32. It should appeal to all who are making a study of water resources and who wish to have an approved method of keeping their records, containing a key map of major divisions, sub-divisions and sub sub-divisions, which are located by various numbers. It is altogether a careful piece of pioneer work.

Bureau of Industrial Research has issued a pamphlet on *Workers' Education, American and Foreign Experiments, 1921*

and another on the *Industrial Council Plan in Great Britain, 1919*. These simply indicate that all who are interested in the relations between employers and employed, may, to advantage, keep in touch with the bureau and its publications.

We received a complimentary copy of the *Year Book and Export Register of the Federation of British Industries*. Those who are familiar with our American commercial registers will see that this covers a good deal of the same ground for British products.

*Heavy Timber Mill Construction Buildings* is the title of a series of loose sheets published by the National Lumber Manufacturers' Association. This is characteristic of much of the quasi-advertising literature which is published by many private concerns and found useful to the general public.

# Library of Stone & Webster, Inc.

## Recent Accessions

### (10) CIVIL ENGINEERING

- 306 Heavy timber mill construction buildings. National Lumber Manufacturers Assn. -wood construction information. Series E-1a to E-1s. Chicago, 1922. 29p, 8x10. \*6972.073
- 307 Contributions to the hydrology of the U. S. Dept. of the Interior. U. S. Geol. Survey. Wash., 1922. 74p, 6x9. \*W S I 500
- 308 Developed and potential water-power of the United States. U. S. Geol. Survey. Wash., 1922. 6p, 8x10. \*6874.0732 1921.
- 309 Muscle Shoals proposition . . . minority view [to accompany H. R. 11903]. 67th Congress, 2d session. Rept. 1084, Part 2. Wash., nd. 12p, 6x9. \*6800.0732ms
- 310 Water resources index inventory filing system for recording, collating and analyzing water resources data. Water Resources Paper No. 32. Dept. of the Interior, Canada. Water Power Branch. Ottawa, 1922. 15p, 6½x9½, map, \*7203 P32

### (20) ELECTRICAL ENGINEERING

- 311 Theory and calculation of electric circuits. C. P. Steinmetz. N. Y. [c.1917]. 361p, 6x9. illus. \*071.St3ec
- 312 Theory and calculation of electrical apparatus. C. P. Steinmetz. N. Y. [c.1917]. 480p, 6x9. illus. \*071.Stea
- 313 A rectangular-component two-dimensional alternating-current potentiometer. A. E. Kennelly and E. Velandier. Contributions from the Electrical Engineering Research Division of the M. I. T. Serial No. 18. July, 1919. Cambridge, 1922. 26p, 6x9. diags. \*071.K391rc
- 314 Current distribution in armature conductors. W. V. Lyon. Contributions from the Electrical Engineering Research Division of the M. I. T. Serial No. 19. July, 1919. Cambridge, 1922. 13p, 6x9. diags. \*071.L994
- 315 An integral equation for skin effect in parallel conductors. C. Mannebeck. Publications of the M. I. T. . . Serial No. 30 May, 1922. 146p, 9x6. V\*071.M3163

### (50) RAILWAYS

- 316 The truth about electric railways. Prepared from statistics and official reports from all parts of the United States. unpag., 3x6. \*6800.El25adNo.6
- 317 The traction problem: fares-rentals-taxation. T. E. Mitten. Phila, 1922. 8p, 5x8. \*1891.R181.0221m

### (73) SOCIOLOGY

- 318 America and the rehabilitation of Europe. Annals of the American Academy of Political and Social Science. July, 1922. No. 191. Concord, N. H. 1922. 217p, 6½x9½. \*029.Am35eu
- 319 Capitalism versus socialism in the light of the present world economic and financial situation. B. M. Anderson, Jr. The Chase Economic Bulletin issued by the Chase Nat'l Bank of the City of N. Y. June 23, 1921. 12p, 6x9. \*025.An23c



## (74) FINANCIAL

- 320 Moody's analyses of investments and security rating books: public utility investments. John Moody. Thirteenth yr., 1922. Moody's Investors Service. N. Y. [c.1922] 1578p, +8½x11½. \*022.M77ap 1922
- 321 Moody's monthly bulletins of ratings and supplements of earnings: Part 1. Steam Railroad Companies; Part 2. Industrials; Part 3. Public Utilities. Moody's Investors Service. N. Y. 1922. vp. 8½x10½. \*022.M77rs/22 \*022.M77ri 5/22 \*022.M77rs 5/22 \*022.M77ru 5/22
- 322 Twenty-third annual number public utility section 1922 . . . Poor's Publishing Co. N. Y. [c.1922]. 248op, 6x9. \*02.M77pu 1922
- 323 Poor's rating service. July 1922 edition. Poor's Publishing Co. N. Y. [c.1922]. 711p, 4x7. \*022.P79r 7/22
- 324 Miss. River Power Co., Keokuk, Iowa. (for the information of investors interested in hydro-electric plants, the history of this company has been prepared . . . ) S. & W., Inc., General Managers. Boston, nd. unpag., 8½x11, illus. \*600.053m, 1919
- 325 Depreciation and Regulation. C. D. Jackson. Cambridge, 1922. 19p, 4x9. \*025.J132d

## (75) ANNUAL REPORTS

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- 344 Membership List, American Gas Association. unsp. 5½x8½. \*6960.M51.1922
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- 350 Solvay rust-resisting paints for iron and steel: a handbook for the information of the man who purchases, specifies or uses protective paint. Semet-Solvay Co. Syracuse, nd. 32p, 4½x6, illus. V\*074.S0489

## Coupons and Dividends Due

	Per Cent.
Aug. 1, Baton Rouge Electric Company, 5s, 1939 .....	2½
Aug. 1, *Edison Electric Illuminating Company of Brockton, Capital Stock, 10 per cent. ....	2½
Aug. 1, *Fall River Gas Works Company, Capital Stock, 12 per cent. ....	3
Aug. 1, Galveston-Houston Electric Company, 7's (Coupon Notes), Series A and Series B, 1925 .....	3½
Aug. 1, Galveston-Houston Electric Company, 8s (Coupon Notes), 1926 ..	4
Aug. 1, Houston Electric Company, 5s, 1925 .....	2½
Aug. 1, Key West Electric Company, The, 5s, 1956 .....	2½
Aug. 1, *Lowell Electric Light Corporation, The, Capital Stock, 10 percent	2½
Aug. 1, Pensacola Electric Company, 5s, 1931 .....	2½
Aug. 1, *Public Service Investment Company, Preferred Stock, 6 per cent. .	1½
Aug. 1, Public Service Investment Company, Common Stock. ....	1
Aug. 1, Puget Sound Electric Railway, 5s, 1932 .....	2½
Aug. 1, Railway & Light Securities Company, Preferred Stock, 6 per cent	3
Aug. 1, Railway & Light Securities Company, Common Stock, 6 per cent	3
Aug. 1, Seattle Electric Company, The, 5s, 1929 .....	2½
Aug. 1, Seattle Electric Company, The, 5s, 1930 .....	2½
Aug. 1, *Sierra Pacific Electric Company, Preferred Stock, 6 per cent. ....	1½
Aug. 15, *Keokuk Electric Company, Preferred Stock, 6 per cent. ....	1½
Aug. 15, *Tampa Electric Company, Capital Stock, 10 per cent. ....	2½
Sept. 1, *Blackstone Valley Gas and Electric Company, Common Stock (\$50 par) .....	2½
Sept. 1, *Central Mississippi Valley Electric Properties, Preferred Stock, 6 per cent. ....	1½
Sept. 1, *Connecticut Power Company, The, Preferred Stock, 6 per cent	1½
Sept. 1, *Connecticut Power Company, The, Common Stock .....	2
Sept. 1, Jacksonville Traction Company, 5s, 1931 .....	2½
Sept. 1, *Key West Electric Company, The, Preferred Stock, 6 per cent. .	1½
Sept. 1, Northern Texas Electric Company, Preferred Stock, 6 per cent ..	3
Sept. 1, *Northern Texas Electric Company, Common Stock .....	2
Sept. 1, Pacific Coast Power Company, 5s, 1940 .....	2½
Sept. 1, Puget Sound Power & Light Company, 8s (Coupon Notes), 1925 ..	4
Sept. 1, Puget Sound Power & Light Company, 8s (Coupon Notes), 1926 ..	4
Sept. 1, Seattle Electric Company, The, Seattle-Everett, 5s, 1939 .....	2½
Sept. 15, *El Easo Electric Company, Common Stock .....	2½
Sept. 15, Galveston-Houston Electric Company, Preferred Stock, 6 per cent	3

\*Payable quarterly.

Dividend rates based on the last declaration.

# Quotations on Securities of Companies under Stone & Webster Management *August 14, 1922.*

The Securities Department executes orders on commission for those wishing to purchase or sell.  
Requests for information in regard to the companies will be answered promptly.

COMPANY	BONDS		PREF. STOCK		COMMON STOCK	
	Int. Rate	Price and Int.	Div. Rate	Price	Div. Rate	Price
Ab. & Rock., The El. Lt. & Pr. Co. of { Notes, July, 1923	7%	100½	No	Pref	8%	125
Baton Rouge Elec. Co. { Bonds, 1939 Notes, Jan., 1923	5% 7%	92 115	6%	86	10%	115
Blackstone Valley Gas & Elec. Co. (Common Stock par value \$50)	5%	96½	*6%	90	10%	72½
Cape Breton Elec. Co., Ltd.	5%	83	6%	65		12
Central Mississippi Valley Electric Properties	No	Bonds		73		10
Chicago, Wilmington & Franklin Coal Co. (Common Stock par value \$10)			*6%	90	10%	23
Columbus Elec. & Power Co.	6%	99	*7% 1st *7% 2d	98½ 88		75
Columbus Power Co., The	5%	95½		.....		.....
Connecticut Power Co., The	5%	93	*6%	90	8%	150
Connecticut Valley Lumber Co. { Serial Bonds June, '24-'34	6%	100 96½				
Eastern Texas Elec. Co. { Bonds, 1942 Notes, May, 1925	5% 7%	91 101¼	*6%	83	8%	91
Edison Elec. Illg. Co. of Brockton { Bonds, 1930	5%	100	No	Pref	10%	180
El Paso Elec. Co. { Bonds, 1932 Notes, 1925	5% 7%	94¾ 101¼	6%	88	10%	123
Fall River Gas Works Co.	No	Bonds	No	Pref	12%	200
Galveston Elec. Co.	5%	87		.....		.....
Galveston-Houston Elec. Co. { Notes, Aug., 1925 Notes, Feb., 1926	7% 8%	101¼ 100	*6%	77 B L		38 B L
Galveston-Houston Elec. Ry. Co.	5%	87	No	Pref		.....
Haverhill Gas Light Co. (Stock par value \$50)	No	Bonds	No	Pref	9%	82
Houghton County Elec. Lt. Co. { Bonds, 1927 Notes, 1923 (Stock par value \$25)	5% 7%	92 100	6%	19		12

COMPANY	BONDS		PREF. STOCK		COMMON STOCK	
	Int. Rate	Price and Int.	Div. Rate	Price	Div. Rate	Price
Houston Elec. Co.	5%	97½ <sup>B</sup>		.....		.....
Jacksonville Elec. Co.	5%	88				
Jacksonville Tract. Co.	5%	81		37		6
Keokuk Electric Co. { Notes, January, 1923	6%	100	*6%	†80		.....
Key West Elec. Co., The	5%	77		.....		.....
Lowell Elec. Lt. Corp., The	No	Bonds	No	Pref	10%	182
Mississippi River Power Co. { Bonds, 1951 Debtentures, 1935	5% 7%	95 <sup>B</sup> 102	*6%	83 <sup>A</sup> 84 <sup>B</sup>		30½ <sup>A</sup> 30 <sup>B</sup>
Northern Texas Elec. Co.	5%	89	6%	85 <sup>B</sup> 86 <sup>L</sup>	8%	90 <sup>B</sup> 91 <sup>L</sup>
Northern Texas Traction Co.	5%	93	No	Pref		.....
Pacific Coast Power Co.	5%	94	No	Pref	No	Com
Pensacola Elec. Co.	5%	81		28		
Public Service Investment Co.	No	Bonds	*6%	85		68
Puget Sound Elec. Ry.	5%	87 <sup>B</sup>		.....		.....
Puget Sound Power Co.	5%	95½	No	Pref	No	Com
Puget Sound Power & Light Co. { Notes, 1925 Bonds, 1941	8% 7½%	100 105	Prior *7% *6%	104 84	4%	54
Railway & Light Sec. Co. { First Series, 1935 Second Series, 1939 Third Series, 1939 Fourth Series, 1942 Fifth Series, 1944 Sixth Series, 1946	5% 5% 5% 5% 5% 5%	95½ 94½ 94½ 94 94 93	*6%	89	6%	80
Savannah Elec. Co.	5%	87 <sup>B</sup> 88 <sup>L</sup>				
Savannah Elec. & Power Co.	7½%	105	*8% *6%	100 69		17
Seattle Elec. Co., The { 1st Mortgage, 1930 Cons. & Ref., 1929 Seattle-Everett, 1939	5% 5% 5%	99 <sup>B</sup> 95½ 90	No	Pref	No	Com
Sierra Pacific Elec. Co.			*6%	77		7
Tacoma Ry. and Pr. Co.	5%	88	No	Pref		.....
Tampa Elec. Co.	5%	95	No	Pref	10%	†136½
Whatcom County Ry. & Lt. Co.	5%	91	No	Pref	No	Com

Quotations are approximate. All stocks \$100 par value unless otherwise specified.

\*Cumulative. †Ex-Dividend. A. Listed on London Stock Exchange. B. Listed on Boston Stock Exchange. L. Listed on Louisville, Ky. Stock Exchange. N. Common shares have no par value. X. Ex-rights.

The Securities Department wishes to bring to the attention of members of the organization the following securities which it recommends for investment :—

<i>Bonds</i>	Rate	Interest and Dividend Dates	Price and Interest	Yielding About
LAURENTIDE POWER CO., Ltd. First Mortgage, due 1946	5	Jan. and July	95½	5.35 %
†EASTERN TEXAS ELEC. CO. Gold Mortgage due 1942	5	May and Nov.	91	5.75 %
SAVANNAH ELEC. CO. First Mortgage due 1952	5	Jan. and July	87	5.95 %
*UNITED LIGHT & RYS. CO. First Lien and Cons. due 1952	6	Apr. and Oct.	96	6.30 %
*PUGET SOUND POWER & LIGHT CO. 7½ Gen'l and Ref., due 1941	7½	May and Nov.	105	7.00 %
*SAVANNAH ELEC. & POWER CO. First and Refunding, due 1941	7½	Apr. and Oct.	105	7.00 %
<i>Notes</i>				
†GALVESTON-HOUSTON ELEC. CO. Gold Notes Series A, due Aug. 1, 1925	7	Feb. and Aug.	101¼	6.50 %
REPUBLIC OF BOLIVIA Sanitation Loan, due June, 1923	6	June and Dec.	98¼	7.50 %
<i>Investment Stocks</i>				
‡BLACKSTONE VALLEY GAS & ELEC. CO. Common	10	Mar. 1 qrtly.	72¼	6.90 %
NORTHERN TEXAS ELEC. CO. Preferred	6	Mar. 1 and Sept. 1	85	7.05 %
PUBLIC SERVICE INVESTMENT CO. Cumulative Preferred	6	Feb. 1 qrtly.	85	7.05 %
PUGET SOUND POWER & LIGHT CO. Cumulative Preferred	6	Jan. 1 qrtly.	84	7.15 %
EASTERN TEXAS ELEC. CO. Cumulative Preferred	6	Jan. and July	83	7.25 %
MISS. RIVER POWER CO. Cumulative Preferred	6	Jan. 1 qrtly.	Market (83)	7.25 %
TAMPA ELEC. CO. Capital	10	Feb. 15 qrtly.	136¼	7.35 %
SIERRA PACIFIC ELEC. CO. Cumulative Preferred	6	Feb. 1 qrtly.	77	7.80 %
SAVANNAH ELEC. & POWER CO. Debenture	8	Jan. 1 qrtly.	100	8.00 %
EL PASO ELEC. CO. Common	10	Mar. 1 qrtly.	123	8.15 %

\*Denominations \$100, \$500, \$1000

†Denominations \$500, \$1000

‡Par \$50

Detailed information will be furnished upon request

## Securities Department Offices

147 Milk Street

Boston

New York

120 Broadway

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# STONE & WEBSTER *Journal*

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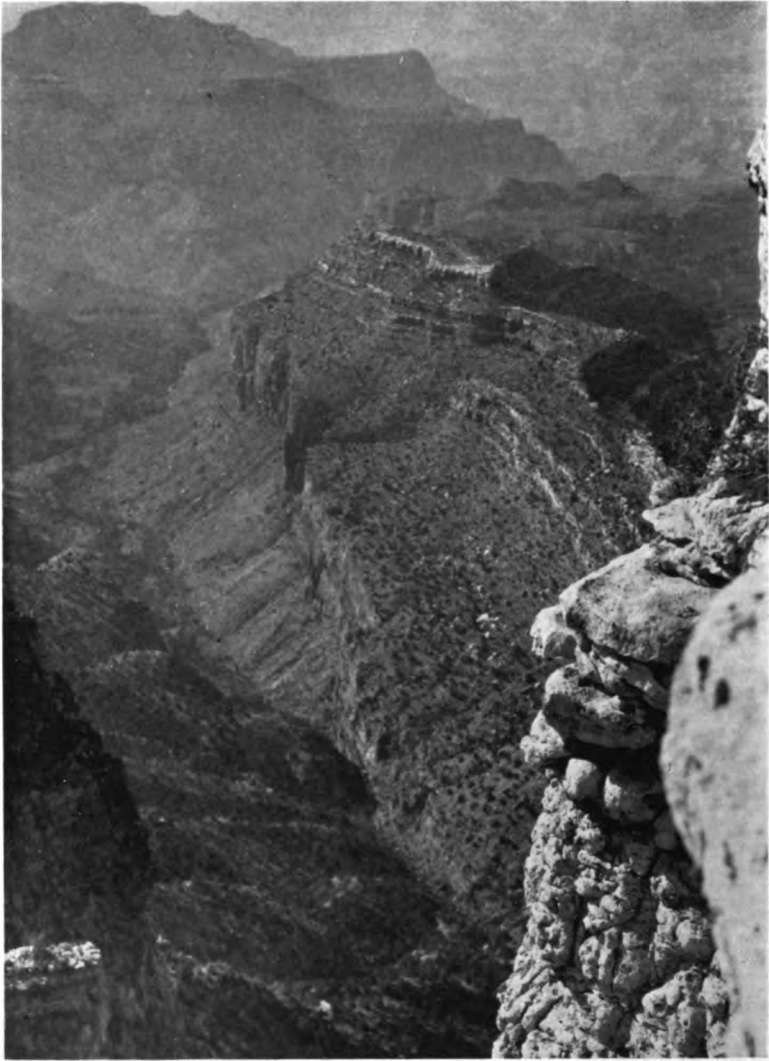
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THE GRAND CANYON OF THE COLORADO

# STONE & WEBSTER

## § JOURNAL §

1922

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VOL. 31

SEPTEMBER

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### EDITORIAL COMMENT

#### The Irishman's Sheet

ON the surface, the industrial situation has a rather queer appearance. The other day, right in the midst of the railroad, the coal mine and the textile strikes, came the announcement that the steel manufacturers were going to advance wages. The fact is, however, that the steel manufacturers, as well as manufacturers in certain other lines, have had to take this step in order to secure a requisite number of workmen. We note here a very significant feature in connection with the tide of affairs in this country.

For years past we have been hearing about the tendency away from the farm. The attractiveness of urban life was making agricultural conditions increasingly difficult, and some direful results were predicted. Today, however, it is reported that in the great agricultural sections there is more than enough labor available. The result has been a reduction in the cost of production, which, other things being equal, should not only in a measure offset the loss to the farmers from the decline in wheat, corn and similar products, but should also lessen the cost of living for the public generally.

But other things are not always equal. So far at least as the effect on the cost of living from the increase in the amount of farm labor is concerned, we must not be too optimistic. For it is quite possible that against a lower cost of certain food commodities, it may be necessary to put a higher cost on a great many of the other requisites of life.

As immigration has been greatly curtailed, it follows that the increased amount of farm labor now available must be due to curtailment of labor available for other industries. We have here an instance of the Irishman's sheet, which was lengthened at one end by being shortened at the other. The effect on some of our standard industries is seen in an abrupt discontinuance of the effort to bring about that lowering of the cost of consumption that was deemed so necessary to a return to normal times. Of course, if the greater abundance of farm labor brings about a real and considerable reduction in the cost of the raw materials of our food and clothing, the people will be in somewhat better condition to stand the high, and possibly higher, cost of other commodities. But just what the outcome will be nobody can at this juncture predict.

The situation is interesting as showing the oscillating character of human affairs. A thing carried too far is apt to produce its opposite. The country regions were depleted for the benefit of the towns and cities, and now the latter seem to be disgorging for the benefit of the country. It is easy to see how this has come about. When the financial depression began in 1920, and mills and factories began to curtail operation, and in many cases to shut down for fairly long periods, great numbers of operatives went back to the soil. We know there was an exodus away from many of the textile centres in New England, and this was undoubtedly the case at the centres of other industries. The high cost of agricultural labor hastened this movement along. During the last year manufacturing industries have run below their maximum output, and efforts have been made all along the line to reduce wages. The laborers who have abandoned the city have had, therefore, slight inducement to come back. A positive advance in the steel industry will undoubtedly bring back all that are needed, and a discontinuance of the wage reduction effort in other lines may have a similar result. Everything considered, however, it is likely to be some time before the conditions existing two years ago are regained.

Meanwhile, what we cannot help wondering is, will the effect on the general cost of living be what could be desired? It is an unmistakable fact that in recent years the cost of living has been burdensome to the people as a whole. Most persons have had to rob Peter to pay Paul. If they have had

what they considered a satisfactory amount of one thing, they have had to get along with an unsatisfactory amount of other things. The question is, will the change in the tide noticed in the last few weeks shortly make the nation as a whole richer than before, or put it on the road to greater riches? If it does not, will the recovery from the depression of the last two years be expedited in any appreciable degree?

### The Right to be on the Earth

SMITH, who belongs to a labor union, was discussing the labor problem with Green, who is non-unionized. "Everyone has the right to strike," he said. "True enough," said Green, "but everyone has also the right to work." Smith thought it over a moment and replied, "Isn't that what organized labor is saying all the time?"

"It may be saying it," rejoined Green, "but it isn't what it means." At this Smith got quite excited. "Do you mean to tell me," he exclaimed, "that we don't know what we are talking about?" "Not at all" was the reply. "You know precisely what you are talking about—you are talking about what you don't mean, and what you know you don't mean, and what everyone else knows you don't mean."

"Well, then, I don't follow you," said Smith. "That doesn't speak very well for your intelligence," rejoined Green. "Put your thinking cap on for a moment and look at the facts—they are right in your back yard. Or, if you don't want the trouble of thinking, would you like me to point them out to you?"

"Go ahead," said Smith, "you'll be doing some work."

"Tell me," said Green, "have I as much right on the earth as you?" "Who said you hadn't?" said Smith. "You have, a number of times. Have you ever heard it said that actions speak louder than words?" "A few times," grunted Smith. "Do you believe it?" "I suppose so." "Well, then," continued Green, "if your actions speak louder than your words, you don't believe that I have as much right on the earth as you."

Smith looked confused. "I don't get you," he blurted out. "You will, perhaps, if you guess again. But hold on, I'll do the guessing for you; your brain pan hasn't enough salt today."

"Tell me something," went on Green, "You unionized fellows can work whenever you please, can't you—provided, of course, there's any work offering?" "Sure," said Smith. "Now then, can I work whenever I please, provided a job is offered me?" "Sure," said Smith again. "But suppose you strike on your job and your employer offers me the job—have I a right to take it?" "Not on your life," yelled Smith. "Why not?" "Because it's my job." "Indeed," said Green; "how did you get it? Were you born with it in your mouth like a silver spoon? Did your father bequeath it to you in his will? Did you make it for yourself by putting up the cash to build and run the mill? Tell me, now, how you got it. Quit fooling; stop trying to throw sand in my eyes; we are after the facts."

Smith hesitated. "Out with it," said Green. "How did you get that job of which you claim exclusive ownership? The place where you work is called 'Brown's Mill'; who is Brown?" "Why he runs the mill," replied Smith. "Did you give him the job?" said Green. Smith hesitated again. "Of course not," he finally answered.

"Tell me something else," said Green; "how did you happen to go to work for Brown? Did you just walk round to the mill and say, 'I'm on your payroll from now on; be good enough to remember the fact?'" "You know I didn't, don't talk like a fool," snarled Smith.

"Well, I'm stumped," murmured Green. "You don't mean to say that Brown *gave* you the job? On your own confession, you were not born with it, you did not inherit it, you did not make it, and you did not put yourself on the payroll without Brown's permission. He *must* have given you the job." Smith could not think of anything to say.

"Tell me one thing more," said Green; "if he could hire you, couldn't he fire you? And if he fires you because you strike, can't he hire me?" "Not if my union can prevent him," replied Smith. "Exactly," said Green; "you will picket the mill, and brickbat me if I try to go into it, and possibly put a bomb in my house."

"So you see," ended Green, "that by your own grudging admission I have not as much right to be on the earth as you. You can do as you please, but I can't do as I please. In fact, I must do as you please. My right to be on the earth is conditional on that. Do you get me?"

## Socrates' Mother

**S**OCRATES' mother was a midwife. The reader may say, "Why in the world should that interest me?" For two reasons. First because she was Socrates' mother, and secondly, because he used the name of her profession to indicate one of his processes of reasoning.

Socrates taught by means of conversation or dialogues. In his search for truth he made use of two processes. The first was the far-famed Socratic irony. Though he was one of the wisest of men, he was in the habit of saying that he knew only one thing—namely, that he knew nothing. He would begin his dialogues with questions about very commonplace things. Indeed, he had the appearance of a learner rather than a teacher. The answer to his first question would suggest another question, and this in turn a third, and so on. By this process of seeming to know nothing, he brought his antagonist to a confession of ignorance. Briefly, by flattering his victim's intelligence at the expense of his own, he landed him in the ditch. A good many of our leaders of public opinion could easily be brought to grief if we only had the sense to subject them to the same treatment.

When Socrates had completely divested his pupils of their conceit, he proceeded to ask them a series of questions to bring to light particular instances on which they were in entire agreement. In this way he would arrive at an idea "of the unalterable nature of the subject discussed." This process he named *maieutic*, the Greek word for midwife. This is not a bad name for the process involving the birth of ideas.

Socrates was rather more than the Athenians could stand. It is not agreeable to have the wind taken persistently out of your sails. It is rather maddening, in fact, to be all the time goaded to search for the fundamental causes of things. Socrates told the Athenians that you must know yourself before you can know other things. Now knowing one's self is the last thing that most of us care about. It is too much work. Nevertheless, you have got to know your tool before you can use it.

In our youth we heard a distinguished scholar exclaim "Celebrate the day that enriches you with a new idea!" It is worth a celebration. New ideas are few and far between.



Those who came before us seized upon most of them. They have left us mere gleanings. The ancients got busy thousands of years ago searching for ideas. So far as we know they had no railroad cars or electric lights or moving pictures, but they knew that you cannot make something out of nothing, that every effect must have a cause, that in order to live you must work, that knowledge is better than ignorance, that justice is necessary in human relationships, that life is mere chaos without discipline, that "the gods approve the depth and not the tumult of the soul."

Mr. Thomas F. Woodlock, in his article in this issue, seems to think that what the world most needs today is men big enough to straighten out its very tangled affairs. The men we now have do not seem to be achieving very much. When the Israelites were in sore distress, with no apparent way out of their troubles, the prophet told them that "their strength was to sit still." That would be some help to us. But, alas! no one is disposed to sit still and wait for an overruling Providence to do the work for us. Everyone is tiring himself out with talk, with proposing this, that and the other thing, everyone calling everyone else either a fool or a knave.

"Then the Lord answered Job out of the whirlwind and said: "Who is this that darkeneth counsel by words without knowledge? Gird up now thy loins like a man; for I will demand of thee, and answer thou me." Like a man! But humanity is conducting itself today like children. The world is in the midst of a whirlwind, and our statesmen, our politicians, our labor leaders are darkening counsel by words without knowledge.

We are up against the Almighty (or in other words, the immutable forces of nature). "I will demand of thee, and answer thou me." When this was said to Job he replied: "I know that thou canst do everything and that no thought can be withholden from thee. Who is he that hideth counsel without knowledge? therefore have I uttered that I understood not; things too wonderful for me, which I knew not."

That is not the way we talk. Most of us know it all. But the trouble is we do not know it all the same way. One person knows it all and so does another, but the thing the first one knows has no resemblance to the thing the second one knows. How are we going to discriminate? Which doctor

shall we follow? We suspect that the one knows about as much as the other. As a matter of fact, is there anything to know? Personally we think there is.

If there is anything to know it must be about the only thing worth having. If we have anything else, life is bound to be more or less chaotic all the time. If ideas are eternal or pre-established, as Plato would say, it necessarily follows that the only way to be successful and happy is to get in touch with them as soon as possible. The farther away we are from them, the more of a muddle the affairs of this world are bound to be in. If ideas are not eternal or pre-established, it follows that they are of human origin and may be anything you care to make them. If one man makes them one way and another makes them another way, the only thing that can be done is to fight it out. The Germans had their idea of sitting in the sun, and the other nations had theirs. The ideas were too divergent for comfort. If no one had had any ideas about sitting in the sun, the world would be a more comfortable place today.

One of the greatest of all the poets exclaimed some thousands of years ago: "Behold, how good a thing it is for brethren to dwell together in unity." Now was the human race made to dwell together in unity, or was it made for the opposite purpose? As we do not possess the all-seeing eye, we shall have to answer this question inferentially—and that, by the way, is the manner in which most questions are answered in this life. We know that our honest, commonplace neighbor seems to have some sort of a constructive purpose in what he does. If he builds a house he builds it to remain. If he rears a family, he rears it with the intent to protect the members of it, to live peaceably with them, to derive comfort and enjoyment from them. If we see one of our shrewd Yankee neighbors inventing a machine, we are as sure as we can be of anything that he wants it to run smoothly and accomplish a certain useful and enjoyable purpose. He does not want it to blow up after it has been running a short time.

So by analogy we may conclude that this tremendous machine which we call the universe was designed to run smoothly and to last. It does run smoothly except in so far as man is allowed a hand in the operation. Man's part is a very small one. Whether the whole universe was planned for the purpose of furthering his welfare, is a question that

has long been debated. But whether it was or not, the universe is here and is so arranged that if he uses it certain ways he will be fairly comfortable, and if he uses it other ways he will be unmistakably miserable. Man creates nothing. He simply takes what is placed at his disposal and makes some sort of use of it. The more he knows himself the better will be his use.

If a man really starts in to know himself, he will in time acquire certain bits of knowledge that are absolutely essential to a well ordered life on this planet. The first is that he is by no means the only pebble on the beach—there are others. The second thing he will discover is that the others have quite as many rights as himself. The third bit of knowledge is that there is such a thing as justice. In other words, that the rights of others have got to be respected if one's own rights are to be effective. Almost everyone is prepared to admit that he is not the only pebble on the beach, that there are others, and that the others have quite as many rights as himself. But when we come to the fourth thing, namely, that the rights of others must be respected, we fall down. That has always been the greatest stumbling block of the human race.

There is, of course, an easy explanation when we transgress another person's right; we say it is not a right right. In other words, no person's rights must be at variance with our rights,—if they are, they are wrongs. Now this is queer. For as we have just said, almost everyone is prepared to admit that others have rights besides himself. That is an intellectual process. As an intellectual theory it is all right until it conflicts with some one or another of our emotional instincts, then the intellect gets busy again; it begins to hunt for proof that a thing cannot be intellectually right unless it accords with *our* primitive emotions.

Thus we are brought face to face with the age-long conflict between mind and instinct. Our instincts or emotions are given to us to set us in motion. Our minds are given us to keep us from making fools of ourselves—in other words, to know how to rate the value of certain emotions and to guide them in their operation. The chief purpose of a sensible person is to regulate his emotions. Indeed, the world has been priding itself on the fact that it lives by mind rather than instinct. A boy is prompted by instinct to coast down a

steep hill in a great city, but he uses his mind in keeping himself from destruction. Well, the whole world has been coasting down hill pretty rapidly of late, and without the necessary exercise of mind.

It does not require much mind to commit suicide. It requires a great deal to live comfortably and happily. Ideas are still the most priceless things in the world, but our ideas today are quite like the mock diamonds and pearls with which we bedeck ourselves. If the decadence of ideas lasts long enough it will mean the bankruptcy of civilization.

It has taken a great many thousands of years to make civilization. It was a slow, arduous process, and it was all the result of proved experience. Now and then, here and there, theoretical attempts have been made to recast civilization, but practically one and all have failed, and for the simple reason that civilization is the product of individual lives. If every individual was just and honorable and public-spirited, you would not have to theorize regarding personal relationships or public affairs. They would take care of themselves. It is just because everyone is not just and honorable and public-spirited that we have to form social and political theories. Theories we must have. The question is—whose?

This brings us to the fifth thing a man will discover if he honestly starts out to know himself. It is obedience. No one can do exactly as he pleases. That is, either with safety to himself or profit to his friends and neighbors. Obedience is a law of life—often, however, more honored in the breach than in the observance. The first thing every one of us learns when he becomes conscious is how to obey. It is a process that sensible people have to keep up until they die. Foolish or ignorant people have for their good to obey all day long. The wisest that have ever walked this earth have had to obey quite as much. They have had to obey the laws of nature, the laws which their wise minds have discovered.

We are hedged in on every side by laws which we did not frame, and which we cannot disregard with safety. There is not a thing that we do, or that we can by any stretch of the imagination conceive of doing, that has not its correlative in an idea. That is, there is a right way to do it, if it is possible to do it at all, and a wrong way, and it makes all the difference in the world which way we choose. But if you

want to do a thing very much indeed it is perhaps not advisable to go into this subject of the right and wrong way. Where ignorance is bliss 'tis folly to be wise. But alas! the bliss is generally too short-lived. When it is over you wish you had been a little more careful in choosing the way.

The world will never get back to where it was until there is stricter obedience to ideas. Not to fanciful ideas, but to real ideas. In the forming of ideas the wish is too frequently the father to the thought. An idea is not an idea unless the person who utters it strives to conform as closely as human intelligence will allow to reality. In the discourse of the day idealism and realism are placed against each other as two opposite poles. Idealism, in the philosophic sense, is the belief in immutable and pre-established ideas. We are born with those ideas implicit in our minds. Socrates' aim was to assist men in making these implicit ideas explicit.

In other words, he desired to make people know their hidden selves. The poet Wordsworth says that we come trailing clouds of glory. That is an expression of the idealist. And it is related of the poet Shelley that he once stopped a nursemaid and an infant in order to interrogate the child, to see if it could remember anything from the world from which it had recently come. That, too, is an expression of the idealist. Laugh as one will at the idealist (we are using the term in the philosophic sense) there is much to be said for him. Certainly there must be a pattern for everything. When we evolve ideas, so-called, we simply hark back in some degree to the eternal pattern. If that were not so this would be a crazy-headed world. Everything would be topsy-turvy and life would be unbearable.

But today the whole world is spending its time darkening counsel by words without knowledge. We should like to see a good many persons now conspicuous subjected to the Socratic irony. If we should hear of one about to undergo this process, we should give him some advice. It would be this: admit nothing. The minute you agree with your interlocutor on any point regarding which no two persons could possibly disagree, you are lost.

Seriously, a tremendous problem confronts us. Our politicians, our labor leaders, and a great many excellent reformers not altogether intimately associated with practical affairs, are telling us that the world is in great need of being

remade. We can conceive of a much better world than this, and we should be very glad to see it remade if the task were committed to competent hands. We once saw an amateur take to pieces a clock with the intent to remake it. The result was melancholy. That is what we should fear in the event of remaking the world.

But suppose we have the courage to go at it. How shall it be done? There are four billion people on the earth's surface. Obviously the number of cooks is too many for the broth. The task will have to be delegated to fewer hands—very much fewer. That creates a great difficulty at the start. Who shall constitute the few? You may say, "the wisest of course." But who are the wisest? Is Lenine wiser than George Washington was? Is Mr. Samuel Gompers wiser than Benjamin Franklin?

Let us assume, however, that we have reached an agreement as to who shall constitute the commission to remake the world. How should the commission proceed? If it acts in a businesslike fashion it should first find out and tabulate the things that human beings cannot control and the things they can. There is a vast multitude of things that are undoubtedly beyond human control and those things the commission should leave severely alone. There are things which we *can* control—seemingly. That is, if we know how to control them aright they will work permanently to our good; if we control them wrongly they will work to our satisfaction for a time, with our last state worse than our first.

But let us suppose that there is wit enough on the earth to regulate all these controllable things aright. As we see men of education and experience differing widely on almost every subject, we have a right to suppose that not everyone is competent to take a hand in regulating these controllable things aright. We must bear in mind that this old world which we now wish to discard was made by the wisest minds of the past. Socrates, Plato and Aristotle are but names to most persons. Yet the teachings of these men have for thousands of years penetrated the whole life of mankind. In the domain of religion, of ethics, of political economy, and of every one of the sciences comparable names could be mentioned. The thought of all these men (wiser, possibly, in their various fields of thought and experience than any men we have today) has by processes undetected by the

average men interpenetrated the activities of mankind as the centuries have progressed.

Yet withal, the world is so far from perfect that we desire to remake it. It is a many sided world. It cannot be successfully remade except in a comprehensive fashion. Many of our politicians, we fear, will desire to remake it in a way that will promote their individual political interests. We have a similar fear that our labor leaders will insist on remaking it in a way to make the living wage transcend every other consideration. Doubtless certain of our industrialists will aim so to regenerate the world as to make bonuses as plentiful as blackberries in June. So there you are.

Personally we are convinced that the task of remaking the world should be delayed until we are unanimously agreed that no selfish or class interest shall figure in the proceedings. We may add parenthetically that in that event none of us will witness the millennium.

But let us be optimistic and assume that it would be possible to eliminate all selfishness and class interest. But that does not make us feel altogether secure. Even if we all promise to be good and unselfish, can we all promise to be wise? Can we feel certain that our commission for remaking the world will be wise? If it is wise and has the power to act, we feel pretty sure it will disappoint a large portion of mankind, possibly the majority. In the final analysis the whole problem is up to this large portion of mankind.

It will be a moral question with them. Will they submit to the dictation of the wise, or will they refuse to submit? In other words, will they become sufficiently acquainted with themselves to know that obedience is a law of life? Will they say that the world should be governed by ideas and that we need the most competent minds to evolve the ideas.

To assist at the birth of ideas is the noblest function in which a human being can engage. The trouble is, so few care to undertake the task. We can conceive of no more strenuous labor. An idea is not a simple thing. It is the most complex thing, for no idea stands alone, each being interpenetrated and influenced by every other one. For example: some months ago a labor leader said that in his particular industry labor should have a living wage, even if the industry made no profit. Here we have two concepts, that of the living wage and that of the profit. Taken by itself the living wage seems

an admirable thing to insist on. But when coupled with lack of profit in industry it is a gross absurdity. A living wage implies a profit in the industry. The two things stand or fall together. The wisest men know this, but at the moment the wisest men are not dictating the policy of this nation with reference to the living wage.

“Gird up now thy loins like a man.” That is a command that every one of us should heed. The wisest should gird up their loins and quit them like men; they should be bold in uttering the truth. The average man should gird up his loins and subject himself to the discipline of ideas. In other words, the wise should scrap their timidity and the ignorant should scrap their futile desires.



# The One Thing Needful

BY THOMAS F. WOODLOCK

MORE than half the passengers arriving by the *Gigantic* had already left the dock and the line at the Customs desk had dwindled to a mere corporal's guard. The reporter of the *Press* concluded that he would take one last look around and then call it a day. He had a rather "mixed bag." It included a New York bank president who had spent six weeks in Europe "studying conditions at first hand" and had handed out seven mimeographed sheets (single spaced) describing the "situation" in Great Britain, France, Belgium, Holland, Germany, Switzerland, Czechoslovakia, Italy and points east. He had two railroad presidents who had given him certified copies of bills for an evening's entertainment in Vienna—including dinner for five, limousine, imperial box at the opera and supper, totals converted into United States money and aggregating \$11.21—together with a free-hand sketch of the "exchange problem" in general. He had a theatre owner with several new plays from Paris and an account of "the stage in Continental Europe" which was interesting—even with the "for instance" left out. He had a Congressman (Democratic)—also on "first hand" work—who crisply charged Henry Cabot Lodge with entire responsibility for the state of Europe, and he had an English novelist who had favored him with some views on "Main Street" which, properly handled, would stir up some lively comment. All told it was a fair day's sport, and he started slowly down the dock, his eyes ranging both sides where a few passengers were yet sitting amid their baggage awaiting the final pieces from the *Gigantic's* hold.

Under the letter *P* he caught the eye of a little man of some 65 years sitting on a trunk with a valise at his feet, his attitude registering patience with a dash of detachment. It seemed to the reporter that a ghost of a smile crossed the old man's face and he smiled back, whereupon the ghost materialized into a genuine grin. The reporter promptly accepted what seemed to be an invitation.

"What's matter, Pop? Didn't she come to meet you?"

"Not so, young man; merely the usual trouble. My trunk is the last out of the hold. It's happened to me 16 times out of 37. I've kept count and this is the third time in series, once this year and twice last year."

"Thirty-seven trips?"

"If you don't think me ostentatious in mentioning it."

"What's your line?"

"Your interest flatters me. It consists of—let me see—four children, two sisters, one sister-in-law, two nephews, one former partner and—(he counted on his fingers)—eleven grandchildren."

"Where?"

"Daughter in London, daughter in Paris, son in Brussels, son in Prag, two sisters in Rome, partner in Switzerland, sister-in-law in Nice, two nephews in Munich—grandchildren scattered."

The reporter suffered visible seizure by an idea. "Move up a little Pop and gimme a corner of that trunk. I'm a newspaper man—*Press*. You ought to know something about Europe by this time. Gimme the story—foreign exchange, currency, bankruptcy, everything, and what's going to happen, and who you are and what."

A quizzical smile from the old man.

"You may copy that label by your knee if you wish. But it won't mean anything to anyone. And I'm out of business these 35 years. And I don't know anything of foreign exchanges or finance nowadays. And I don't know enough about Europe to know what's going to happen. I'm not a banker, anyhow. But I'll answer any question you ask—if I know the answer, that is."

He turned and submissively awaited the reporter's pleasure. That gentleman scratched his chin meditatively and breathed hard. Things were not breaking as usual. Finally—"Well—er things are different over there from what they were, aren't they?"

"They certainly are."

"What's the difference then? Fundamentals—brass tacks—bed-rock—none of this hotel-bill stuff, but the real thing. What is it?"

"Ah!" said the old man and the smile vanished. "You know how to ask hard questions. I congratulate you. It is half the battle to put the right question and the right question is usually hard to answer. The *real difference* between now and before the war—*Rem acu tetigisti*—beg your pardon!"

"It's all right," hastily answered the reporter, "I know a little French."

"Of course. I withdraw the apology. It occurs to me that you can assist me to answer your own question. I propose an experiment in *maieutics*."

"I pass! You make it, partner."

"Well, let us see! We are right, are we not, when we say that, before the war, the world got its living by the use of labor and machinery upon the earth and its products?"

"Sure!"

"Clearly, it is the same earth now as before the war, is it not?"

"You said it."

"We must, however, admit that many men were killed or disabled, must we not?"

"I'll say so!"

"Yet, is it not true that many men are in fact idle today?"

"You bet!"

"It is also true, is it not, that there is almost as much machinery available today for productive and distributive use as there was before the war—except in a few places, as, for instance, Russia?"

"I'll admit it if you say so."

"You are safe in so doing. And yet, we observe do we not, that, in general, European countries are producing less and exchanging less with each other than before the war?"

"Right you are!"

"Do we not rightly conclude, therefore, that it is not a lack of men nor a lack of machinery which is the cause of the present state of things?"

"We do!"

"Must we not then look for the cause in the wills of men themselves?"

"We must!"

"Now the will of man is motivated by desire, is it not?"

"If you say so!"

"And desire is inflamed by hope and chilled by fear so that in the one case the will is strongly moved to action and in the other case it is restrained."

"Listen!" said the reporter earnestly, "I'm going down for the third time. Reach me a hand! Name some names! Draw me a picture—or something!"

"You are too modest, oh boy of Meno!—no offense meant, young man—but we were really getting on famously, it

seemed to me. I could have demonstrated to you that you know as much about Europe as I do. However, as you prefer that we should come to the concrete—so be it. You ask me about currency depreciation and foreign exchange. From my observation among members of my own family, I gather just two things on the subject. One is that this bank-note printing has wiped out the middle-class of Europe, and I can prove it out of my own check book. In Germany it has simply meant a cancellation of all debts. Remember that the middle-class is essentially a creditor class, which invests in obligations, while the millionaire class is essentially a debtor class. Big business men are usually in debt for property. They make profits by borrowing the savings of the middle-class. Germany no longer has a middle-class and no longer has any "savings." Neither has Austria. Neither has Poland. Neither has Hungary. In Italy the middle-class is terribly impoverished. Not so much in France and Belgium, but a good deal. Less in England, but still enough to hurt very badly. You and I are middle-class people. Our kind are wiped out in Europe. That's what 'currency depreciation' has done to my people." The old man paused. "Yes?" said the reporter whose pencil had been busy. "Don't stop. What's the other thing?"

"Wait a minute," said the old man, "I'm not done with the middle-class. Our whole civilization has been a middle-class civilization. Middle-class savings have built our railroads, our ships and our factories, and have financed our governments in peace and war. How much is the mark worth today?"

"About sixteen hundred to the dollar."

"My nephew in Munich says the savings banks in Germany have about fifty billion marks of deposits. They are worth, therefore—say \$30,000,000 in the United States—less than fifty cents per capita. They will never be worth much more and may be worth less. Besides this the commercial banks have deposits of about one hundred and twenty billion marks, worth \$75,000,000 in the United States, say one dollar per capita besides, and they won't ever be worth much more, and may be worth less. The internal German Government funded debt is about a hundred billion marks—say \$60,000,000 United States—the floating debt about twice as much more—say \$120,000,000;

total say \$180,000,000, or less than three dollars per capita. It will never be worth much more and may be worth less. What I'm trying to show you is what has happened to the middle-class. And what I want you to tell me is how Europe is to come back with its middle-class partly ruined everywhere and completely ruined in Germany."

"Foreign exchange—?" suggested the reporter.

"Bankers' prattle!" said the old man, whose tone of banter had given place to a crisp staccato utterance. "What difference does it make where the decimal point is, provided that it stays there? That will settle itself when the more important things are settled."

"Meaning—?"

"Men—just men. That's all, merely men. There aren't any men big enough for the job. You asked me what the *real* difference was between now and before the war and I'll tell you what it is—what I think it is. Before the war, we had a machine going which made a living for the world. That machine had grown up on our hands in about a man's lifetime—say 75 years. Everyone had a place in it—of sorts. Everyone co-operated after a fashion, most of us blindly, unconsciously, unwillingly, but we co-operated. We did as we were told more or less, and we followed the men who told us, and then the machine ran away with us because there weren't enough men who were big enough to manage it. The war was the result. The war lasted four years because there weren't men big enough to stop it, and it just burned itself out and burned the world out with it. For four years we have been trying to make a peace and we haven't been able to make it because there aren't men big enough to make it. *We've been trying to make ideas do the work of men.* The world is safe enough for democracy today, but it isn't much of a place for anything else. Ideas won't get it going again, and I don't yet see the men anywhere who can do it. And the world isn't getting today the living it got before the war, and it won't get it until the men show up and we fall in behind them. Life is a hard thing in Europe today for those who knew it before the war—a hard thing, and I'm afraid it will be harder before it's easier. Too many ideas, too few men—and one other thing."

"Yes?"

A porter dumped a trunk at their feet.

"Ah! the missing trunk. One hour and 16 minutes after the other. Young man, you will excuse me I hope. I have much enjoyed your company." He rose to go for a Customs man.

"Hold on a moment, Pop!" said the reporter. "What's the other thing?"

"I fear I shall disappoint you somewhat. But as you insist—in my youth we called it original sin."

## Grand Canyon Pictures

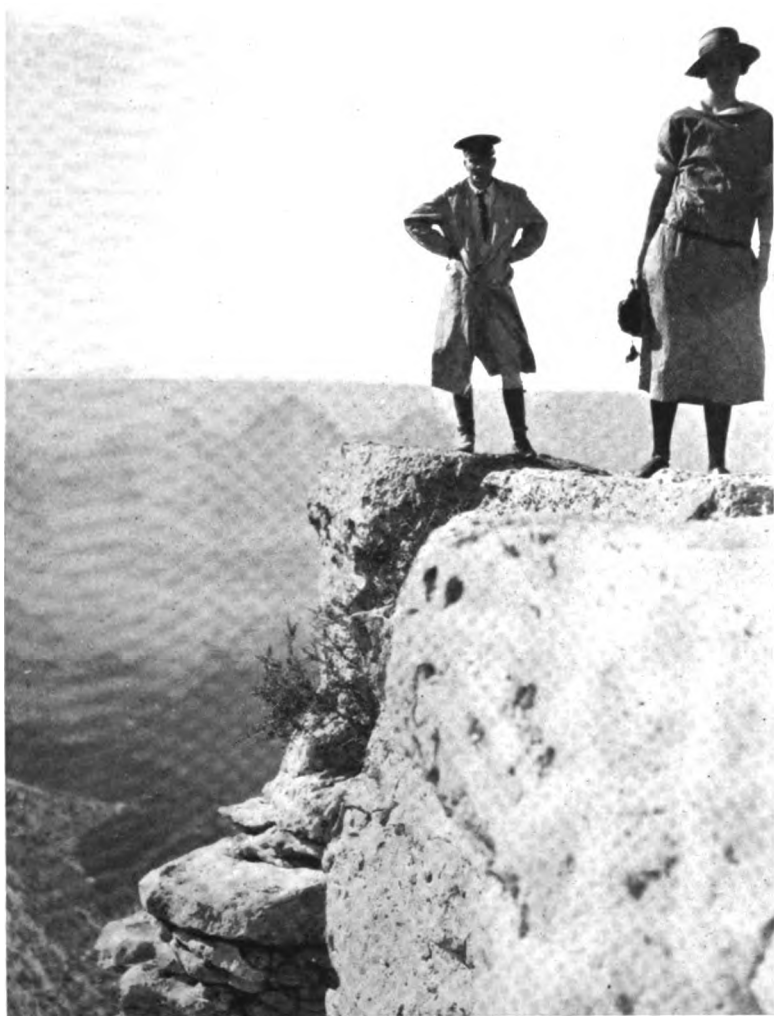
THE following pictures (and frontispiece) are from photographs taken by Mr. E. S. Webster, at the Grand Canyon on his way back from China and Japan. Mr. Webster was two days at the Canyon and made the trip to the bottom, where the thermometer registered 110 degrees. Mr. Webster's experience was not unlike that of other tourists, and calls for no special reference. The pictures which he took, however, may perhaps be of great interest.

No words and no pictures can, however, afford an adequate idea of the Grand Canyon. It transcends the imagination. From what one reads about other places, one is quite safe in stamping it as absolutely unique; there is nothing on the earth's surface that can be classed with it. About a generation ago someone told a story about the Canyon, from which one can gather an idea of its stupendous character. It was something like this.

At that time, when the Canyon was very much harder to get at than it is now, a party of tourists of several nationalities approached the marvelous abyss. The first on whom the scene burst was the Chinese cook. He came to a standstill, his legs went apart, his arms were glued to his sides, his eyes stuck out from his head—he stood transfixed, incapable of even an ejaculation. Then came a stolid Britisher. He gave one look and burst into tears. Following him came a Frenchman, who became emotionally ejaculatory. Last of all appeared a Yankee—he halted and exclaimed, "Well, I'll be damned!" They all meant the same thing.

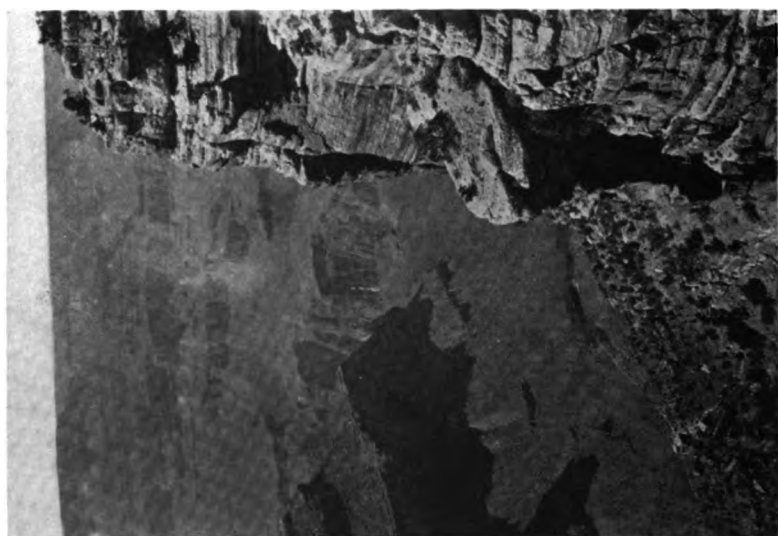
Nowhere can there be found such a harmonious view of majesty and loveliness. The serenity overpowers you; here the creative mind employed its most titanic forces, but the effect upon the spectator is one of divine tranquillity. Mile after mile to right and left extend those sublime cliffs, in configuration the most picturesque, the most romantic and the most poetic. The ever-changing shadows that lie upon them are indescribable. Every passing cloud imparts an intoxicating witchery of color.

The Canyon is about a mile deep. The descent is made on mules and is really an arduous feat. It is much more advisably undertaken, particularly in the case of women, after one has had a day or two to get accustomed to the rarefied air and the intense heat.



ON THE BRINK





TITANIC BUTTRESSES



THE DESCENT OF THE CANYON



IN THE CANYON



**A PUEBLO**



**THE BANKS OF THE COLORADO**

One can ride mile after mile along the brink and see sights that can never be forgotten. In places there will be a sheer drop of 2,000 feet. At this depth the eye finds a resting place, only to be fascinated by profounder views. At certain points you behold the bottom and catch glimpses of the Colorado. So marvelous is the atmosphere that the appalling tumultuousness of the river may, at an elevation of a mile, be plainly discerned. You note the muddy water and also the white caps.

The history of the Grand Canyon is an interesting study. It is still a debatable point whether the gigantic chasm is the result of erosion or of more catastrophic influences. The Spanish explorers got a view of the Canyon as far back as 1540, but were utterly unable to get down into it. It was not until 1869 that anyone succeeded in exploring it. On May 24, of that year, Major Powell, of the United States Army, started with nine men and four boats from Green River City on the Green River in Utah, and after unutterable hardships, landed at the mouth of the Virgin River in Nevada, on August 30, 1,000 miles from the starting point. The Canyon is over 200 miles long, from 9 to 13 miles wide and 6,600 feet deep.

## The Boiler House of The American Sugar Refining Company at Baltimore, Md.\*

By E. B. POWELL

**T**HE boiler house has only in recent years been accorded even moderate appreciation and, although today it is being heard of quite as widely as any other department of the steam power plant, its importance may still be emphasized to advantage.

To an industry such as the refining of sugar, the proper functioning of the boiler house is altogether vital. Almost every phase of every process in the refinery is directly dependent upon the application of steam as a heating or drying agent. For this reason also, the cost of steam is an important factor in the manufacturing costs of the refinery.

In the design of the boiler house for The American Sugar Refining Company at Baltimore, the effort has been made to combine a high degree of dependability, efficiency and simplicity in operation, and agreeable conditions of work in a type of construction readily adaptable to the economic requirements of any permanent or long-term condition of fuel market, such as might call for the installation of economizers in any form, or the substitution of any other class of fuel than that initially selected.

The steam requirements estimated for the present developed capacity of the refinery were about 7,300 boiler horsepower average, and 8,800 boiler horsepower maximum demand. It was also considered that further developments might possibly increase the steam demands by about 50 per cent. The general suspension of refinery operations over Sunday would allow opportunity for any minor repairs that might be required in the steam generating equipment, so obviating the necessity for much duplication in reserve, and permitting the economic adoption of moderately large units even for the initial development. On these bases 6,000 rated boiler horsepower in 1,200 horsepower units was decided upon as the most suitable capacity to be installed for present requirements and 9,600 rated horsepower as the probable ultimate growth of the boiler house.

\*Paper presented at the joint meeting of the Baltimore Engineers Club and of the Baltimore Sections of the American Society of Mechanical Engineers and American Society of Civil Engineers, May 24, 1922.

Before definitely determining upon the fuel to be adopted for the initial development, the Consulting Board of the refinery made careful survey of the possibilities of all fuels considered commercially available. This study led to the selection of a grade of small sized anthracite, popularly known as "creek coal," as most satisfactorily and economically meeting the requirements. This coal is not only low in price and, for practical purposes, entirely free from deterioration in storage but possesses as a fuel for the refinery boiler house the additional and important advantages of cleanliness—the refinery is turning out an essential food product of the highest quality—and of permitting the adoption of a single fuel for the entire plant—anthracite is required in the refinery processes for firing the bone charcoal regenerating kilns. While the major equipment of the boiler house was designed for ready adaption to any type of fuel, the special requirements of this grade of anthracite were, of course, given first consideration.

Figure I shows the refinery boiler house and outdoor coal plant as viewed from the Patapsco River; Figure II, a representative cross section of the boiler house. The building is of structural steel frame with brick walls and reinforced concrete flooring, the basement being at the grade of the lot and the main operating floor about 28 feet above. Dimensions of the present structure are 111 feet 5 inches wide by 132 feet 10 $\frac{3}{4}$  inches in length with a height of about 125 feet from the ground level to the top of the coal bunker housing. The ultimate design calls for a building length of about 170 feet 5 inches. The building footings rest on a continuous concrete mat foundation supported on wood piling closely spaced.

The main operating floor is practically clear of all equipment, except the boilers and stokers themselves. Liberal aisle space is provided to give convenient access at all points. Also, to minimize attendance, practically all the auxiliaries of the station are grouped together on the mezzanine and basement floors under the west line of boilers. The space under the east line of boilers is utilized for offices, toilet and locker rooms, laboratory, tool and storeroom, raw sugar electric truck charging station, and repair shop.

The boiler house stacks are of reinforced concrete, 200 feet high above the roof, 15 feet internal diameter, supported on

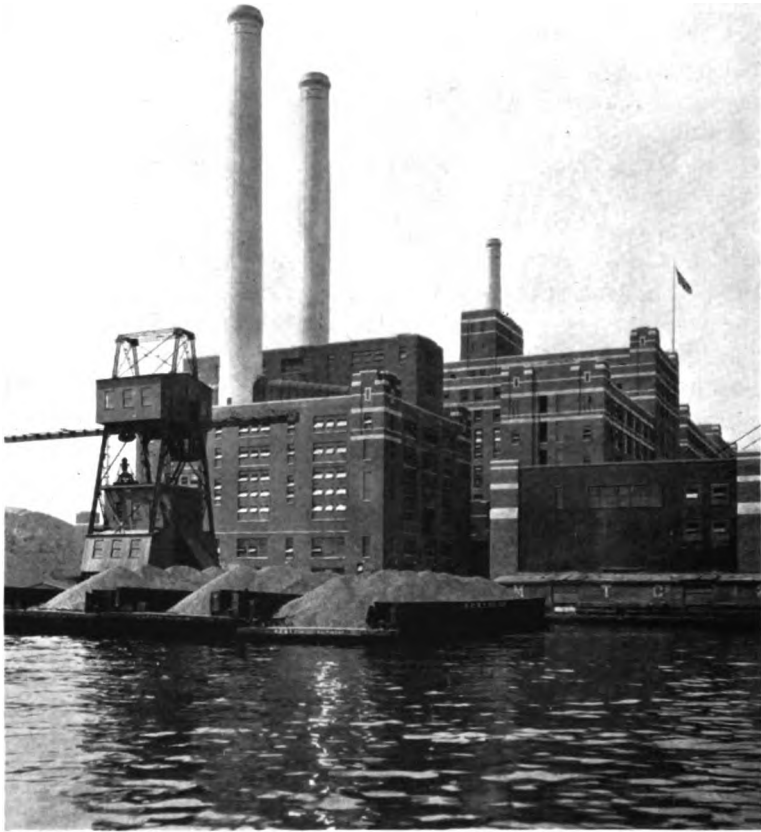
the building frame at the roof level. The coal bunker is of reinforced concrete, of the longitudinal type, set above the firing aisle and having a capacity of about 1,200 tons, or three or four days' estimated normal requirement. To provide for ample daylight illumination, the bunker is raised somewhat higher than is usual and continuous skylights are set at either side, which admit a full flood of light into the boiler aisles.

The main coal storage is provided out of doors in the lot space bordering on the waterfront and to the east of the boiler house. Coal is normally delivered by rail to the B. & O. Railroad pier head where it is discharged on to refinery owned barges of about 700 to 800 tons capacity. Boat shipments of coal could, of course, be received with almost equal facility; the depth of water at the coal receiving pier is about 14 feet. The loaded barges are warped alongside the refinery coal wharf with the aid of electrically driven winches and are there unloaded, either directly to the station or to the yard storage, by means of an electrically operated movable tower of the through-boom type carrying a two-yard bucket of 150 tons hourly capacity. The movable tower has a storage and reclaiming capacity of about 9,000 tons immediately beneath the boom; the remainder of the 25,000 ton outdoor storage capacity, or space for about 16,000 tons, is served by locomotive crane.

Coal intended for the station bunker is delivered by the movable tower on to a 30 inch trunk line belt conveyor which in turn delivers to the double chain fixed bucket type elevating conveyor at the north end of the boiler house. From the latter conveyor, coal is distributed to the different sections of the bunker by means of a 24 inch belt conveyor and automatic tripper. From the bunker, coal is delivered to the stoker hoppers by an electrically operated automatic weighing larry. A separate pocket is provided in the boiler house bunker for coal intended for use in the filter house kilns; this coal is conveyed to the filter house by special overhead belt conveyor and weighed on automatic weightometer en route.

Steam leaves the boiler house and condensate, hot and cold water, and compressed air from the refinery reach the boiler house over a bridge near the northwest corner and at a level slightly above that of the mezzanine. The main steam header within the boiler house is in the form of a loop with one side carried above the east line of boilers, the other side





**FIG. 1. THE BOILER HOUSE OF THE AMERICAN SUGAR REFINING COMPANY'S  
NEW PLANT AT BALTIMORE**

accessibly located at the rear of the west line of boilers about three feet above the operating floor. At the point of take-off for the two lines which lead respectively to the engine house and to the refinery, provision is made for opening the loop and feeding these two lines separately, with a regulating valve between set to maintain the desired pressure in the engine room main. In normal operation, one of the division valves in the boiler house loop will be closed to segregate to the engine room main the boiler capacity required to carry the power load, the balance of the boiler capacity on the line feeding through the other side of the loop to the direct refinery main in which any pressure above 110 pounds will meet all requirements. With this arrangement, sudden demands in the refinery can produce only negligible drop in pressure at the engine house and such loss of pressure as may occur in the refinery main may readily be regained before there is any interference with manufacturing processes.

The boilers are in 1,206 horsepower units, Stirling type, with 26 per cent integral economizer surface and are encased in settings which, except for the rear wall back of the integral economizers, are of solid fire brick. There are no superheaters. The boilers are designed for 250 pounds pressure and will normally operate at about 210 pounds. They are equipped with 18 element mechanical soot blowers; also, with automatic feed water regulators. To avoid risk of corrosion, the interior surfaces of all boiler drums and of economizer sections complete, both tubes and drums, are treated with a special carbon coating. This coating has been applied as a measure of extra precaution, as under normal conditions all air and other gases will have been removed from the boiler feed and there should be no tendency to corrosion in any form.

Flues and uptakes are of steel plate with two inch inside insulation. Provision is made in the space above and at the rear of the boilers, including the space now occupied by uptakes, for the installation of additional economizer surface or of air heaters, should either prove desirable in future, and for cinder catchers, should the need for such apparatus appear.

The stokers are of the traveling grate type, two per boiler, with an effective surface for each stoker 9 feet 8 $\frac{5}{8}$  inches in width by 16 feet 4 inches in length, giving an area of about



317.5 square feet per boiler, or a ratio of grate surface to heating surface of 1:38. Each stoker is driven by a  $2\frac{1}{4}$ -3 horsepower direct current motor with hand operated drum controller.

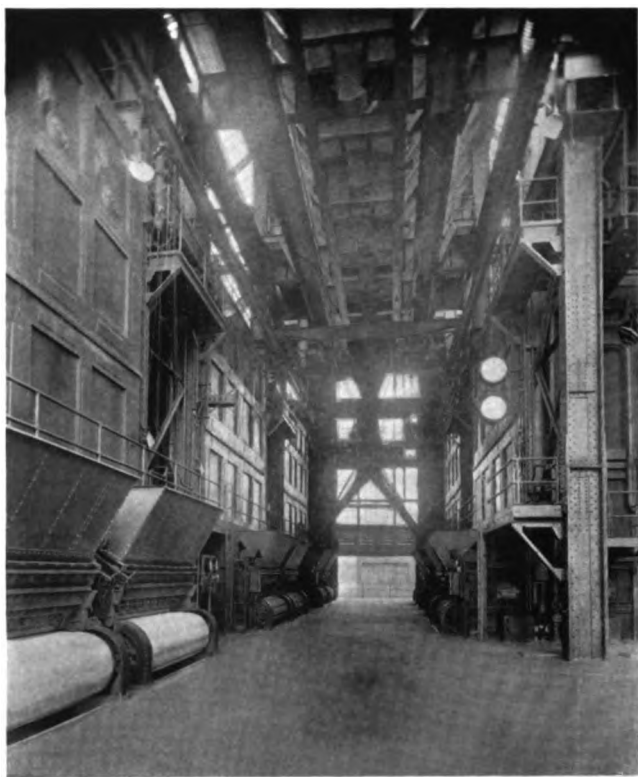
Ash hoppers are of reinforced concrete, brick lined, providing capacity sufficient for about 16 hours' requirements and so set as to give ample clearance for the standard railway car of full gondola size beneath. Ash gates which form the bottoms of the hoppers are operated by air cylinders and designed to discharge directly into the railway cars.

All auxiliaries, except one feed pump for emergency and starting purposes, are electrically driven. Direct current motors are used throughout and give a maximum of flexibility in speed control. There are four feed pumps installed; all of centrifugal type, two motor driven of 750 g. p. m. capacity, one motor driven and one turbine driven of 350 g. p. m. capacity. All feed pumps are grouped together in the west basement. Forced draft is supplied by three turbo-vane type fans of 90,000 c. f. m. capacity at  $5\frac{1}{2}$  inches pressure driven by 125 horsepower motors under automatic control from the steam line pressure. These fan sets are located on the basement floor under the west line of boilers and draw the bulk of their air supply from the ash alleys. Adjustable louvres opening into the fan bays from the west mezzanine are, however, provided for ventilation.

For cleaning purposes and for operation of ash gates, damper regulators, and other devices a 200 c. f. m. motor driven air compressor is provided which is located with other auxiliaries in the west basement. Reserve air supply is had by pipe connection with the compressor plant of the refinery.

#### FEED WATER SYSTEM

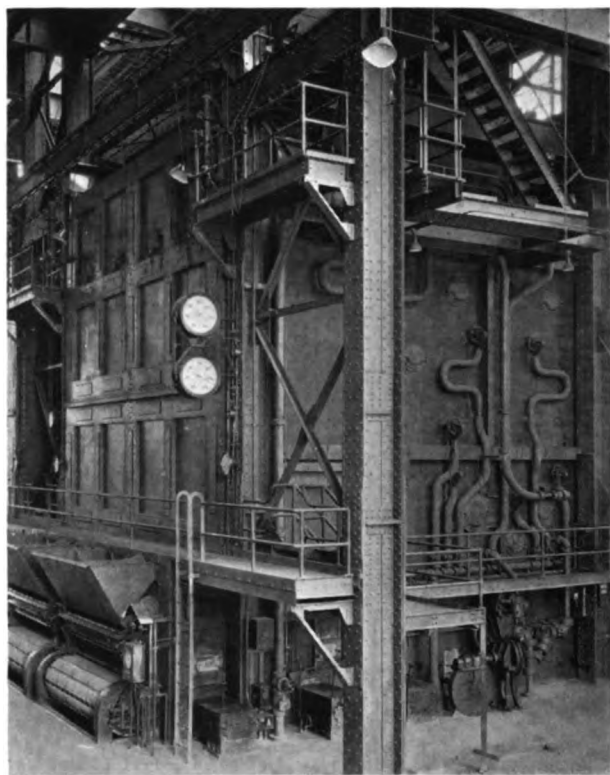
As practically all steam leaving the boiler house, including that used for power purposes, is condensed in closed coils in the refinery and so normally available for boiler feed, the feed water make-up requirements estimated are but slightly greater in percentage than those of the modern condensing type electric generating station. To meet the accidental condition of evaporator coil leakage, or other cause of contamination or loss of condensate, however, it has been necessary to make provision in the feed water equipment for the emergency use of raw water exclusively.



· FIG. 3. THE FIRING AISLE

Under normal conditions, condensate will be returned from the refinery at a temperature of between 180 and 220 degrees F.; the raw make-up water will normally reach the boiler house at city main temperature, about 50 to 70 degrees F. The condensate returned to the boiler house is first passed through standard toweling type filters to remove any suspended impurities; from the filters it discharges into a 12,000 gallon receiving tank which is located on the west mezzanine. The normal make-up, direct from the city mains, is delivered first to a deaerator of 24,000 pounds per hour capacity, located above the receiving tank and on the west wall of the boiler house. In this apparatus practically all dissolved oxygen and other gases are removed. The deaerated water, so called, is delivered direct to the receiving tank under float control at about 190 degrees F. A 15,000 gallon storage tank equipped with float seal to prevent air contamination is set in the northwest tower of the boiler house to provide a reserve supply of deaerated water for boiler filling purposes and to meet all except the most unusual or emergency demands. At times of low make-up requirement, this storage tank will be filled. Its contents at all times is indicated by pneumatic gage conveniently located on the wall of the west mezzanine. The supply from this reserve storage is fed into the receiving tank automatically, as required, through a float operated valve. Two emergency supplies are provided, one from the hot water system of the refinery, the other direct from the city mains, both under float control, the latter at the lower level. The emergency supply direct from the city mains is delivered to the receiving tank through a closed type high pressure heater. The opening of the float controlled valve on this line causes the simultaneous opening of a motor operated valve admitting steam to the emergency heater, after which, regulation of temperature is under thermostat control. When the float operated valve closes off the emergency supply to the receiving tank it at the same time causes the motor operated valve to cut off steam to the emergency heater.

The several float controlled valves are set to operate in the order named. The condensate returned from the refinery will, of course, furnish the normal main supply, to be utilized to the fullest possible extent, and the float control on the direct feed from the deaerator will be set to supply all normal



**FIG. 4. ONE OF THE BOILER UNITS, SHOWING ARRANGEMENT OF  
ACCESSORY EQUIPMENT**

make-up. Demands in excess of these normal requirements will ordinarily be met by the deaerated reserve supply in the 15,000 gallon overhead tank. The float valve controlling this supply is set to operate when the water level in the receiving tank falls below the range of the deaerated make-up valve. Under emergency conditions, when on account of extensive contamination or for other causes it is necessary to divert a large percentage of the refinery condensate from the boiler house, the additional make-up requirement may be supplied direct from the hot water system of the refinery or, if this is not desired, from the city mains and whenever such conditions occur, so that the abnormal make-up requirements materially exceed the reserve supply of deaerated water, this latter supply is cut off automatically, to be retained for future use after normal conditions may have been resumed.

As referred to above, the bulk of the condensate and make-up water will normally reach the receiving tank at a temperature between 180 and 220 degrees F. Condensate from the high pressure mains in the boiler house is taken care of by a Holly system which, of course, returns this condensate direct to the boilers. Condensate from the low pressure, or exhaust mains in the boiler house is collected in traps which discharge directly into the return tank in the engine house and are returned to the receiving tank with other condensate through the oil filters. To guard against possibility of reabsorption of air and the possible resulting corrosion of integral economizers, it has been considered advisable to maintain the temperature of water fed to the boilers practically at the boiling point at all times. For this purpose the receiving tank has been equipped with removable type heating coils which are supplied with low pressure steam and designed to maintain practically boiling temperature for the water in this tank. Steam supplied to the receiving tank heating coils is under thermostatic control.

#### INSTRUMENTS

The more important instruments employed in gaging the boiler and furnace performance—two electric tachometers to indicate the grate speed of each stoker and a boiler meter recording steam output, rate of air flow, and flue temperature—are mounted on a small slate panel at one side and immediately in front of the several boiler units. For guidance



in adjustment of drafts, multi-reading draft gages are mounted, one at each side of the boiler in convenient view of the stoker blast box damper levers and a third gage at the rear of the boilers beside the exit damper control.

Illuminated master gages, mounted at either side of the main operating aisle and about midway of the ultimate length of this aisle, indicate, on the one hand, the pressures carried in the two distributing mains leading from the boiler house to the engine house and direct to the refinery, respectively, and, on the other, the rates of steam flow in these two mains. The steam flow through these mains is also recorded by meters which are mounted on a small slate panel beneath the corresponding master gages and of general design and position to harmonize with the boiler meter panels referred to above. An illuminated number signal, operated from the vacuum pan floor in the refinery, gives the fireman advance warning of major changes in load. There are also numerous indicating and recording thermometers and gages which are required in following the performance of the feed water system and other details of the boiler house equipment. These latter are in general located closely adjacent to the apparatus to which they apply.

#### SELECTION OF BOILERS

The refinery type of load, while including a fairly large proportion of power of reasonably stable demand, is subject to relatively wide fluctuations which may come at any time of day, as the vacuum pans are cut in or cut out. For this reason it is necessary to carry continuously in service sufficient steam generating capacity to take care of the maximum demand, this steam generating capacity on the average being operated at only moderate ratings. For this service, the Stirling integral economizer type boiler was selected as combining, with low first cost, very high efficiency at all moderate ratings, exceptional ease of inspection and maintenance, and, with the steam take-off from the rear drum as here adopted, remarkable freedom from tendency to prime under sudden heavy demands. Also, for the peculiar requirements of anthracite in the small sizes decided upon for the Baltimore refinery, this general type of boiler possesses, over any other type of approximately equivalent efficiency, the added advantages of wider grate space and of presenting to the

furnace gases steeply inclined tubes, which experience with anthracite has demonstrated are less liable to heavy coating and clogging of the heating surface from deposits of slag and ash than the tubes of boilers of the so-called "horizontal water tube" type.

#### COMBUSTION EQUIPMENT

In determining upon the method of combustion, pulverized coal firing was thoroughly considered, but it did not appear at the time that the apparatus required in the preparation of anthracite was sufficiently well developed. The traveling grate stoker was decided upon as the most satisfactory type of combustion equipment commercially available, for this particular coal. However, the plant design provides for later adaptation to pulverized coal firing, if desired.

One of the most serious difficulties, or more aptly perhaps, one of the most serious sources of loss, encountered in the use of very small sized and so-called "creek" anthracite for boiler fuel has been the high percentage of the material that has remained unconsumed—either discharged over the end of the grate with the ash or carried by the gases beyond the zone of combustion to be deposited in some cooler part of the boiler, or over the surrounding neighborhood. One of the chief defects, seemingly inherent in the traveling grate type of stoker, has been that of gas stratification, insufficient mixing of gases so that in the usual case, gases given off from that part of the fuel bed near the front, in other words, near the entrance of the furnace, carry a relatively high percentage of combustible constituents, as CO for example, with insufficient air for their combustion, while those gases from the rear of the grate carry an excess of unused air and oxygen.

Boiler furnaces in this country have, with two or three exceptions, been of box-like construction—for a traveling grate, two boxes connected together—offering but little interference with simple stream line flow of the gases. With such an arrangement of furnace, operating beyond the most moderate ratings, the richer gases from the front of the grate rarely find the full air requirement until they have passed over a part of the heating surface so that combustion if not already extinguished must continue through the boiler, resulting in loss to efficiency and, occasionally in exaggerated

cases, serious damage to the boiler plates and other parts not designed for direct contact with intense flame.

The arch arrangement used in the furnaces of the refinery boiler house, and shown in Figure II, is intended as a step toward overcoming these several sources of loss and inefficiency. The rear arch deflects the gas flow over the corresponding portion of the grate surface, from a generally rearward direction, toward the front of the furnace and by so doing checks the shower of fine unburned particles into the ash pit—a phenomenon characteristic of the combustion of small sized anthracite in the usual type of furnace—and gives opportunity for the lean gases from the rear of the grate to combine with those from the front. The width of throat between front and rear arches is so proportioned that some degree of mixing of gases is forced to occur except at the very lowest ratings. The presence of the rear arch, by its radiating and reflective capacity, also tends to increase the rate of combustion at the rear of the grate and so further reduce the carbon loss to the ash pit.

As the rear arch is not only exposed to the most intense heat of the furnace, but also projects directly into the furnace at the hottest zone, it was considered necessary to provide forced ventilation. Air for this purpose is obtained direct from the blast duct and, after traversing the rear arch, passes forward through the side and center walls to be finally discharged into the furnace at the rear face of the lower front arch where it serves to aid combustion of the rich gases traveling close under the arch from the front of the furnace. The final mixing of gases occurs under the upper front arch, which also forms a deflector to throw the gases into the boiler heating surface. The intention has been that the mixing zone between the lower front and rear arches and the upper front arch, by affording increased intensity of combustion at this point, would not only hasten combustion of evolved gases, but also promote combustion of those solid coal particles normally carried off the grate by the draft.

Preparations are now underway for complete tests of one of the boiler units. In connection with these tests it is intended to make thorough trial of the creek anthracite of several different degrees of fineness. The tests are planned to develop not only the relative commercial values to the refinery of these different coal sizings, but also the general characteristics of a furnace of the design shown.

## Conditions In Stone & Webster Territory

*The managers of the companies operated by Stone & Webster, Inc., write to the Management Division of Stone & Webster about the first of each month with reference to conditions in their respective localities during the preceding month. A digest of these letters is published each month in the Stone & Webster Journal.*

### GENERAL NOTES

MR. C. A. STONE is spending a few weeks at Plymouth, Mass.

MR. E. S. WEBSTER is at Holderness, N. H., for the first part of September.

MR. RUSSELL ROBB and Mr. H. G. BRADLEE have returned from their vacations.

MR. H. B. SAWYER is taking his vacation at the North Shore.

MR. A. F. TOWNSEND, manager of the Eastern Texas Electric Company, stopped in the office on his way to Maine, where he is spending his vacation.

MESSRS. S. B. TUELL, receiver, and A. F. REESE, attorney of the Houghton companies, visited this office in August.

MR. ROBERT L. GIFFORD, superintendent of gas department, Paducah Electric Company, was in the office during August.

MR. ARTHUR L. MANNING, power station student at Baton Rouge, was here last month.

MESSRS. W. E. BOARDMAN and H. P. FESSENDON, who have been in the Drafting Division for many years, have been assigned to the Construction Division.

MR. H. B. BROWN, formerly with the Construction Department, has returned to the organization as a member of the Structural Division.

MR. CHESTER A. CORNEY has resigned from the Electrical Division to take a position with the Edison Electric Illuminating Company of Boston.

The Division of Construction and Engineering has accepted a contract from the Potomac Electric Company for replacing a 5,000 kilowatt turbine with one of 12,000 kilowatts; also a contract from the Southern Phosphate Company for the design and construction of a 14 mile wood pole transmission line and three outdoor transformer substations. They have been retained by the Calumet and Hecla Mining Company to make a study of power station operation in their several plants in Michigan; by the Boston Woven Hose Company for the engineering and installation of oil burning equipment at their Cambridge, Mass., plant, and by the Westinghouse Lamp Company of Bloomfield, N. J., for the design and construction of a factory building.

MR. C. B. FRAZER has been transferred from Columbus, Ga., to the treasurer's office.

MR. JOHN R. GARDNER, who has been employed in the treasurer's office for the summer months, has returned to his studies at the Harvard Business School.

MISS ALICE M. WELCH has been employed as typist in the treasurer's office.

MESSRS. A. R. HATHAWAY, FRANCIS X. HEALY and W. S. ROCK have taken positions in the treasurer's office.

MR. R. O. HIMEL, assistant treasurer of the El Paso Electric Company, visited the office early in September.

MR. R. M. HARDING, manager, and Mr. G. K. HUTCHINS, commercial agent, of the Columbus Electric and Power Company, were in the office during the first part of September.

Mr. H. A. LEMMON, of the Personnel Department, is taking his vacation at Wrentham, Mass.

The members of the BULLKONEY CLUB held a reunion, field day and chowder party at "The Hummocks," Hamilton, R. I., in August. The full membership was present.

Mr. J. T. G. NICHOLS, of the treasurer's office, has returned from his vacation, spent at Gloucester, Mass.

Mr. J. H. BISSELL is again in his office after a vacation at Cataumet, Mass.

Mr. RALPH H. WILLIAMS, of the Personnel Department, spent his vacation in New Hampshire.

Mr. FRANK B. HERTY, Steven's Institute, 1922, has become a member of the Statistics Department.

#### BATON ROUGE, LA., AUGUST 25

The Standard Oil Company is running at its capacity, and considerable new construction work is being done. Other industries appear to be operating at a normal rate.

Wholesalers and retailers report that business is good, and they are all looking forward to an unusually successful fall and winter season.

Although results for July were not quite so favorable as they were in June our net earnings exceeded the estimate slightly. Rains throughout the month have been frequent and severe, and have affected our railway earnings very materially. Light, power and gas departments are running just about even with the estimates for August.

The real estate market is very quiet due partly to the mid-summer season and partly to unsettled conditions.

Labor continues plentiful and reasonable in price, although there is no great amount of unemployment.

T. L. SMALL, manager, attended a meeting of the managers of the Southeastern district in Jacksonville, during the month. On the return trip Mr. SMALL stopped over in Birmingham for a few days to look over the coal situation.

W. D. CHALMERS, assistant treasurer, made a short trip to Beaumont during the month.

J. C. LAMB, commercial manager, was called to Tampa during the month because of the serious illness of his mother, and everyone was sorry to learn of her death.

M. H. FAURES, assistant superintendent of distribution, was married on August 15, to Miss Audrey Carpenter, in Zachary, La. Mr. and Mrs. Faures spent a few days in New Orleans after the event, and on their return were presented with a beautiful set of silver given by the employees of the company.

Y. P. BRAUD has joined the accounting department as collector, taking the place of C. H. KING, who has been advanced to prepay ledger clerk.

J. M. BERGERON has resigned his position as meter reader, and has been succeeded by T. M. TINER, formerly of the railway department.

Mrs. L. MANN, of the accounting department, has returned from her vacation spent in Vicksburg.

O. B. STEELE, general storekeeper, has returned from his vacation spent in Covington.

Miss C. N. NAWADNY, switchboard operator, is spending her vacation with relatives and friends in Monroe, La.

Miss JESSIE CARMENA of the accounting department, is spending her vacation in Covington and New Orleans.

Miss ELLA CONVERSE, of the accounting department, is spending her vacation in the northern part of the state.

**BEAUMONT, TEX., AUGUST 26**

Local industries in both Beaumont and Port Arthur report a substantial amount of business being handled. Refineries are now running very close to their maximum capacity, while the local machine industries have picked up a substantial amount of business.

Wholesale and retail merchants report business a trifle less active than last month, which is to a great extent a seasonable condition. They do not feel at all pessimistic about the outlook locally for fall business.

The outlook from the company's standpoint for the fall is very good. We have been adding customers steadily, and show a gain of 932 customers connected up to the first of August. Our power output last month was greater than any month in the history of the company, and we believe that the output for the balance of the year will hold up well. Railway earnings are more in line with retail conditions, in that they have shown no improvement in the last two months.

Building in both Beaumont and Port Arthur has been going at an unusually active rate for over a year and still continues. Our growth in customers connected is a reflection of this condition.

Employment conditions are sound in Jefferson County, as the refineries have taken on some men due mostly to increased output and to construction work carried on. There is very little unemployment.

The Eastern Texas Electric Company held its employees' fourth annual picnic July 26, at the Port Arthur Pleasure Pier. Weather conditions were excellent, and as a result, there were more than 800 persons present, which included the families and friends of employees. In addition to various sports and a ball game between the "Pen Pushers" and the Railway Department, which the "Pen Pushers" won, dancing and swimming were enjoyed all day.

Miss J. M. BAILEY, of the stenographic department, left on July 31, for a two weeks' vacation.

Mr. H. F. SPREEN, 1922 graduate of electrical engineering at the Agricultural and Mechanical College of Texas, joined the organization on August 1, as a student in the light and power department.

Mrs. A. F. Townsend and daughter, Pauline, left on August 3, for a few months' sojourn in Maine.

Mr. W. A. ROBERTSON, railway superintendent, accompanied by his wife, left on August 5, for a vacation trip to Tennessee.

Mr. L. G. EUGLEY, of the Beaumont accounting department, returned from Galveston on August 25, where he had gone to meet his wife, who was returning from a pleasant visit in Maine.

Mr. E. S. BURR, general clerk of the Beaumont accounting department, left on August 14, for a vacation in Mobile, Ala.

Miss NELL MERRIMAN, stenographer in the Beaumont accounting department, left on August 21, for a two weeks' vacation.

Miss LUCIEL DECKER, stenographer in the Port Arthur office, left the organization on August 1, to resume her studies in the State University. Miss GRACE INMAN has taken over Miss DECKER's duties.

MISS PAULA KIRKLEY, clerk in the purchasing agent's office, resigned her position on August 15, to accept a position she had formerly held with the railroad company. Her place has been filled by Mrs. LYNNETTE HASKELL.

MR. E. L. ROBINSON, student in the railway office, left on August 26 for a vacation at his home in Bryan, Tex.

MR. T. H. SMITH, of the Beaumont accounting department, has completed the work he has been doing for the Galveston Electric Company.

MR. A. F. TOWNSEND, manager, spent August 21 in Houston on business with MR. BRADLEY and MR. CLIFFORD.

MR. S. A. BRULARD has been transferred from payroll clerk to cashier, MR. BENNIE HUGHS taking his duties.

MRS. ELIZABETH METZKE, of the Beaumont sales department, left on August 21 for a vacation.

MISS FANNIE LAND, clerk in the Beaumont sales department, left the organization on August 1, going to Colorado to spend the summer. She is planning to go back to college at Oklahoma City. Miss LORICE FICKEN has taken over Miss LAND's duties.

MR. SELWYN SCHARBROUGH, salesman in the Beaumont sales department, resigned on August 1. MR. LEE McCLURKIN, formerly in the accounting department, has assumed duties of salesman.

MISS JANE SCHERER, of the Beaumont stenographic department, leaves on August 26 for a vacation to be spent in nearby towns.

MR. A. F. TOWNSEND, manager, left on August 25 for a vacation trip in the east.

MR. H. GRADY PRATHER, salesman in the Port Arthur office, left on August 14 for a vacation.

#### BROCKTON, MASS., AUGUST 22

Local industries are much busier than they have been for a long time. This condition is reflected in the wholesale and retail trade.

A steady improvement is shown in the company's load and output, although greater improvement is anticipated with the approach of the fall months.

New business has shown a tendency to fall off somewhat; despite this fact 229 additional customers were taken on during the past 30 days.

Material improvement is shown in the building trades, there having been a big increase in the number of permits granted for new dwellings. From the city records it appears that the month of August will be the best month of the year in the total number of permits granted.

Work on the extensions to Centre Street and City Hall Square is progressing satisfactorily, and it is hoped to have the work completed before snow flies.

The labor situation remains quiet.

The company held its field day at Mayflower Grove, on July 25. This year the families of employees were invited, and there was an attendance of about 350. The trip to the grove was made in 50 private cars, and two special trolley cars which left Brockton at about 8.30 in the morning.

Two ball games were played and land and water sports for women, men and children, with suitable prizes for the winners, were held. Also unlimited merry-go-round and launch rides, ice cream cones, peanuts, pop corn and tonic for everybody.

At about one o'clock an excellent dinner was served. MR. A. F. NELSON, our

manager, made a very gracious little speech immediately following this, thanking the employees for the loyalty and co-operation which had made possible the fine record of our company. Dancing was enjoyed during the afternoon to the music of an excellent orchestra.

Among the guests we were privileged to have Mr. H. A. LEMMON, of the Boston office, with Mrs. Lemmon. About 6.30 a tired but happy crowd left the grove voting this outing the "best ever."

MR. A. SCUDDER MOORE, of the power department, has returned from a vacation spent in automobile trips in Massachusetts and New Hampshire.

MISS HELEN PATTANGALL, telephone operator, is spending her vacation at Seaside, Me., making the trip by automobile.

MR. HARRY SMITH, sales manager, is spending his vacation with his family at Prudence Island.

MISS HELEN CONLEY, of the accounting department, is at Onset for a week.

MR. HOWARD RANDALL, head of the meter department, is spending his vacation at his old home in Maine.

MISS MILDRED DELANO, of the accounting department, has returned from a vacation spent with friends at Providence, R. I.

We regret to announce the death of Rev. Nathan H. Harriman, who died on August 21, after an illness lasting about three months. He was the father of F. G. HARRIMAN, of our power department.

#### COLUMBUS, GA., AUGUST 23

The operation schedule of the local mills remains unchanged. The Southern Cotton Oil Company have repaired their plant and beginning this week will operate every day. A new cotton export firm capitalized at \$10,000 expects to start business within the next few weeks.

Cotton picking is proceeding rapidly. The continued rains for the past six weeks have injured the crop and a short yield is expected.

Wholesale business is taking on an optimistic tone. Retail business is just beginning to feel the increased activity due to this year's cotton crop. Retailers report good Saturday sales for every week during the month.

The Buick Sales Agency have restocked their salesroom with several carload lots of new cars. The Overland Sales Agency report heavy sales during the month, of these a large percent was to farmers.

Georgia Railway & Power Company are still taking 3,000 kilowatts daily. The river flow for the entire month has been such that the amount of steam generation required has just about equalled that which we would ordinarily have purchased from Georgia Railway & Power Company.

With regard to the coal situation during the month, we purchased 2,000 tons for use at the power station. The gas coal which is being supplied under contract is being shipped according to schedule.

The West Point Iron Works have a contract for a \$10,000 store to be erected in North Highlands, and a \$12,000 residence which will be constructed in Wynnton. Homes are being built in all parts of the city. There were few real estate deals made during the month.

The paving of Fort Benning road will probably be started soon. With the construction of numerous officers' quarters and with the decrease in the quota which has been ordered to Benning for the coming winter, the housing situation here is much relieved, and rents will be decidedly cheaper than they were for 1921.



The Central of Georgia Railway is still advertising for shop help, although they do not seem to be having difficulty in getting sufficient labor to maintain their equipment in fair condition.

The failure of the Senate to pass the highway bond issue has caused all road building to slack off with a resulting increase in the number of unskilled laborers out of work.

MR. R. M. HARDING is attending the managers' meeting in Jacksonville, after which he will join Mrs. Harding for a few days at Atlantic Beach.

MR. L. H. CROWELL and family have returned from a pleasant vacation at Hendersonville, N. C.

MR. B. T. LONGINO and family motored to North Carolina for a vacation in the "Land of the Sky."

MR. RALPH PETERSON spent part of this month in Newark, N. J., where he took the Westinghouse meter test course.

The Electric City Benefit Association entertained its members and friends at a watermelon cutting on August 9, in the yards of the car barn.

MR. A. S. BRADLEY, claim agent, has returned from a delightful vacation spent at Niagara Falls, Buffalo and Cleveland and other points.

MISS ANNIE PROHL, of the accounting department, is spending a month with friends and relatives in Atlanta and Gainesville, Ga.

MR. FRANK BILLINGS, of the accounting department, is spending several days in Florida.

MR. FRED C. MORTON, of the Savannah Electric & Power Company, spent several days in the city as the guest of Mr. J. JACOBS.

MR. M. J. FOX and MR. C. E. BELL motored to Birmingham this month to secure coal for the power and gas departments.

MISS LOLA HARBUCK has returned to the office after spending a very pleasant vacation.

Our company baseball team won the game last Saturday with a score of 3 to 2 from the Meritas mills. This tied our team with the Eagle & Phenix team. Much interest is centered in the game for next Saturday between our team and Eagle & Phenix mills, which will end the second half of the Industrial Baseball League.

#### EL PASO, TEX., AUGUST 22

Business with the local industries is reported to continue generally quiet. The mines in this district are gradually increasing their payrolls and orders for material.

Wholesale and retail men report that their business continues poor, which is customary locally during the summer months. Wholesale men are not filling as many orders from the territory as they might, due to slow credits. Collections are reported to be poor.

Permits were issued during July, 1922, for 96 bungalows and seven apartment houses. July exceeded any previous month for building since 1916. Total permits for July, 1921, were \$187,284. The largest permit was for the Burleson Public School of \$67,470.

Much unemployment continues among common and skilled labor due to the local railroad strike and to the usual dullness during the summer months, although the building crafts are fairly well employed.

MR. J. F. McLAUGHLIN, lighting superintendent, has returned from a two weeks' business trip to the Boston office.

MR. MIKE FLIEY, day dispatcher, accompanied by Mrs. Fliey, left August 1, for a two weeks' vacation.

MR. ALBA H. WARREN attended a meeting of the managers of the Texas district, held in Houston this month.

MR. CARL KOZLOSKE, night dispatcher, has returned from a two weeks' vacation trip.

MR. FRANK McNALLEY, paymaster, has returned from a vacation spent in Houston, where he visited his parents.

MR. WILLIAM HOUSE, barn foreman, attended the foremen's vocational training class held at Austin, Tex.

MR. E. R. FONTAINE, purchasing agent, has returned from a pleasant vacation spent at Cloudcroft, N. H.

MR. CHARLES A. BRANN, superintendent of traffic of the Houston Electric Company, formerly of this company, is in El Paso on account of the illness of his wife.

MR. A. H. WILLIAMS, purchasing agent of the Houston Electric Company, is spending his vacation in El Paso.

MR. CHAS. LEARMONTH, chief engineer, is spending his vacation with his family in Los Angeles, Cal.

MISS ADDIE KERR has joined our organization as stenographer in the commercial department.

The wedding of MR. H. I. WAMBEAM, electrical engineer, and MISS FLORA GOFF of the lighting superintendent's office, was performed at the home of the bride on August 1. MR. and MRS. WAMBEAM have left for a month's tour of the West coast. With the marriage of Miss GOFF, the company loses a valuable employee of long standing.

A number of the employees of the company motored to Diversion Dam, New Mexico, Sunday, July 23, for an all day outing. Leaving the city at 7.00 A.M., they arrived at the dam in plenty of time to get a good swim in the cool of the morning. Dancing was enjoyed at the pavilion in the afternoon.

#### EVERETT, WASH., AUGUST 23

The demand for lumber and shingles continues satisfactory and it is believed that the industry is in a healthy condition fundamentally. However, the accumulative effect of the railroad strike is now being felt more severely. As a consequence, an acute shortage of cars is being experienced, only 35 to 50 per cent of the demand for cars being supplied. This shortage has been augmented by the assembling of cars for the purpose of moving the fall crops. With this small supply of cars which are furnished quite spasmodically, it has been rather difficult for the mills to plan their production.

The shingle mills, which have always depended upon rail shipments, have found themselves in a difficult predicament. Several have closed down and others are contemplating closing down. Water shipment is being investigated thoroughly, which may relieve the condition partially.

Water shipments of lumber continue heavy, as previously reported. During the month of August rain was experienced several times, finally breaking the long drought. As a consequence, the logging camps are reopening as rapidly as possible. However, having rid themselves of one handicap, a new one immediately appeared for those logging camps which do not own their own car supply, namely—the above mentioned car shortage. The truck loggers and those having private railroads are

operating to full capacity. The general outlook of these three main industries is bright, providing that sufficient cars can be assembled to move the farmers' crops. If this is impossible, it is believed that there will be a reflection due to this curtailment in buying power.

Local wholesale and retail merchants report trade very satisfactory during the month.

Traffic on the interurban lines has continued heavy during the month of August and was stimulated by the annual Burlington Fair and by the state convention of Elks held at Anacortes. The latest reports available of earnings for the entire line from Seattle to Bellingham show approximately 40 per cent increase above last year, and it is believed that this will continue for the balance of the summer.

Receipts on the city lines for the first 15 days of August show a decrease of 5.9 per cent. When allowance has been made for the loss of the Snohomish Line earnings, the city lines show an increase of 4.6 per cent. This increase is due practically to the heavy earnings on the Seattle-Everett portion within the city limits.

A shipment of approximately \$9,000 worth of wire was received during the past week to be strung in the Mukilteo, Home Acres, Lake Stevens and Marysville districts. This work should progress rapidly, as all poles on the last three extensions have been set.

Considerable residence building is continuing during the favorable weather.

No shortage of men is being experienced.

#### FALL RIVER, MASS., AUGUST 22

Merchandising shows an improvement over the corresponding period of a year ago, but has not got back to normal conditions.

The company is showing a steady gain in send-out; with the coal shortage affecting householders' fuel supplies this will probably be greater in the future.

There is a large amount of building going on in Fall River.

In the cotton industry there are no unusual labor conditions existing. The scarcity of building mechanics continues.

MR. J. J. DOWLING, formerly with the Baton Rouge Electric Company, has been transferred to this company.

MR. JAMES W. HOWARD, student engineer, entered the employment of the company on August 1, being transferred from the statistics department of the Boston office.

MR. W. K. EAVENSON, sales manager, officiated as referee in the final play for the *Fall River Evening Globe* trophy and medal for the racquet wielders of the public parks.

MR. W. D. STEWART and family have returned from an automobile trip through the White Mountains and along the coast of Maine.

MESSRS. NUTE, DEXTER, EAVENSON, GILBERT and EDLUND spent a pleasant day with the employees of the Pawtucket Company at their annual outing.

During the month the friendly rivalry between the shop and works baseball nines resulted in several close games.

On August 11 and 12 occurred the informal reopening of the office, which has been remodeled and redecorated.

On July 28, MESSRS. DUFF, PEARSON and EDLUND visited the Electric Light and Power Company of Abington and Rockland in connection with a study of consumers' accounting.

On August 4, MESSRS. NUTE, DEXTER and GILBERT made a business trip to the Haverhill Gas Light Company.

The following members of the company are now on their vacations: MESSRS. GEORGE L. GILBERT, W. K. EAVENSON, ROBERT DREGHORN, C. T. JOHNSON, SEDGWICK, EDLUND and BOTTOMLEY, and the MISSES JACKSON, BENNETT, NICKERSON, BORDEN, PETTEY, BLOSSOM and ROBINSON.

#### FORT WORTH, TEX., AUGUST 24

All local industries are operating on a larger basis than at this time last year with the possible exception of the packing houses. These plants are operating on about a 50 per cent basis.

The railroad shops have recruited small forces, and are endeavoring to keep their equipment in running condition with the assistance of the officials.

The Chevrolet Motor Company have reopened their assembling plant. However, only a small force has been employed as yet.

Several concerns have been negotiating with the industrial department of the Chamber of Commerce, and the negotiations in most cases have gone to an advanced stage. Among these is the Armstrong Steel Co., a reorganization of the Armstrong Rolling Mill which is to be capitalized at \$2,500,000. The promoters say that if their efforts are successful, the capacity of the present plant will be greatly enlarged, and several thousand people will be employed.

The Monkey Grip Rubber Company has taken over the Texas Motor Car Company factory for the manufacture of automobile tires; the Helm Mechanical Company to be capitalized at \$100,000, will manufacture oil mill machinery, etc.; the Mint Cola Company, which is to be capitalized at \$100,000, is a bottling concern, and will manufacture various kinds of soft drinks.

The Cement Plant mentioned in our last letter is practically assured. It will have a capacity of 2,000 barrels of cement per day, and will employ approximately 150 people. The Chase Bag Company, we understand, has authorized a local real estate man to purchase a location for them, and will erect a factory which will employ in the neighborhood of 600 employees, mostly women.

Neither the shopmen's nor the coal miners' strikes have affected industries to any extent in this vicinity. Most industries burn either oil or gas, therefore, a coal shortage will have no appreciable effect.

The secretary of the Retail Merchants' Association states that the retail business in Fort Worth shows an improvement over last year.

Wholesale business is reported as being unusually brisk during the past month, which may be accounted for by retailers placing larger orders with the jobbers, fearing a tie-up in transportation.

Babson's statistics show this city as having the largest gain in purchases of any city in the state.

Residential building activities continue very active; especially in most all of our suburban sections.

The railway shopmen's strike situation continues on about the same basis as last month. The strike, as a whole, has been conducted in an orderly manner in this city.

A strike of the garment makers' union at the Miller Manufacturing Company of this city resulted in this concern threatening to move their factory from Fort Worth, due to violence against their employees whom they had employed in an effort to operate their factory on an open shop basis.

The drouth has damaged the cotton crop somewhat in West Texas, however it is estimated a yield above the average will be harvested. The ranges in some portions of West Texas are in need of rain.

MR. G. H. CLIFFORD, manager, attended a district managers' meeting in Houston, on August 21.

MR. W. C. FORBESS, assistant manager, and wife, are spending several weeks in the mountains in West Texas.

MR. LUKE C. BRADLEY was in Fort Worth on business on August 17 and 18.

MR. V. W. BERRY, general superintendent, accompanied by Mrs. Berry and their daughter, Gertrude, spent several days during the month in Brownsville and vicinity.

MR. HUGH S. STALCUP, line foreman, accompanied by his family, made an automobile trip to South Texas during the month. MR. STALCUP spent several days looking over the street railway systems in Houston, Beaumont and Port Arthur.

MESSRS. L. E. THORNE, G. J. FRY, E. B. SMITH, S. E. HOOTEN, J. E. BOTTS, and W. H. CALTHORP are camping and fishing for a few days in the Ozark Mountains, Arkansas.

MR. ROBERT K. BANNER, of the El Paso Electric Railway Company, is visiting relatives in Fort Worth.

MR. W. M. HOWARD, of Galveston Electric Company's claim department, spent two days in Fort Worth during the month. He is investigating the several mutual aid associations in the district, with the view of making some changes in their association.

MR. D. V. THOMAS, student engineer, has just returned from a several weeks stay in Galveston where he had been assisting the Galveston Electric Company on appraisal work.

#### GALVESTON, TEX., AUGUST 24

Exports from this port for the month of July aggregated \$11,996,393.

August 15 marked the beginning of weekly sailings from Galveston to Bremen by Lykes Bros. This will be the first weekly service to Germany from any gulf port. It was established in anticipation of large cotton shipments to that port.

Agents for the Hamburg-American Line yesterday made known that regular service will be resumed between Galveston and Bremen and Hamburg.

The United American Line is negotiating for a steamship agency to handle business for them at this port. On August 19, they entered the gulf, establishing service from New Orleans, but contemplate operating from Galveston, Beaumont and possibly Houston, beginning with September.

Both the Morgan and Mallory lines have announced that they have every reason to expect that within a short time a permanent schedule of three ships per week will be in effect.

Full cargo shipments of jute bagging and other manufactures directly from India are being made to Galveston and are expected to add a large share to the quota of Galveston's imports during the next fiscal year.

A recent reduction in wharfage and loading charges on sugar places Galveston on a par with Texas City.

Crude oil importations into Galveston for the month of July aggregated 540,000 barrels, showing a decrease of 334,000 barrels when compared with the month of June.

Grain exports for the first half of August from this port were approximately

2,500,000 bushels and, basing the figure on clearances so far this month and bookings of several full cargoes, it is estimated that shipments for the month will reach 5,000,000 bushels.

Wheat exports for July were 1,394,417 bushels. This figure shows an increase of 538,000 bushels over June, but a decrease of more than 10,000,000 bushels as compared with exports for the same month last year.

Flour, sulphur, rice, lumber and miscellaneous commodities show big gains for the fiscal year ending July 31, in the annual maritime committee report. Bookings of flour from Kansas City have picked up considerably during the past few weeks, and indications are that there will be a heavy movement through this port during this year.

Heavy declines are recorded in exports of cotton, cotton seed meal and cotton seed cake for the year.

A conference of coffee roasters from Texas, Oklahoma and adjoining states, together with members of the Galveston Commercial Association, steamship men and other interests, was held here last Saturday, with the view of bringing about increased importations of coffee through Galveston, as this port enjoys a better rail rate than New Orleans to the territory represented by the men at this meeting. The urgent need for an importing concern here was stressed, and Mr. L. J. Bright coffee importer, who has been handling most of the coffee shipments through this port during the last few months, expressed his willingness to move the operative end of his firm from New Orleans to Galveston and consolidate with local capital to form an importing concern of sufficient proportions to supply the coffee roasters in this territory.

Almost 400 members of the Texas Highwaymen's Association held a two day conference in Galveston, August 4, 5.

Approximately 1,000 members of the State Woodmen of the world came to Galveston, August 14-21, for their annual encampment.

Two hundred agents of the American National Insurance Company convened here August 11, 12.

More than 100 delegates from all parts of the states assembled here August 17 for the semi-annual meeting of the Texas Warehouse and Transfer Men's Association.

A delegation of nearly 150 members attended the Lone Star State Medical, Dental and Pharmaceutical Association in this city, August 15-17.

Building activities continue good in Galveston.

The erection of two modern fireproof structures at the State Medical College and the virtual rebuilding of the main building in order to make it modern in every way was authorized by the Board of Regents at a meeting held on August 23. The expenditure for this work will be approximately \$400,000.

Work is progressing on the experimental beach groin at the foot of 24th Street. This will consist of two parallel curved rows of piling, the top of which will be six feet above low tide and the space between the rows will be filled with brush and rock. Some sand has already been added to the beach as a result of the construction work already done, and aside from acting as a sand trap to the gulf, the groin will also serve as a breakwater.

MR. A. H. CANNON, formerly of the Eastern Texas Electric Company, Port Arthur station, assumed the duties of chief engineer of the Galveston plant as of August 1.

MR. W. M. HOWARD, assistant claim agent, spent several days in Fort Worth in connection with benefit association matters.

MISS EVELYN NELSON, complaint clerk, has returned from a two weeks' vacation spent in Brenham, Texas.

MISS JULIA THEOBALD, stenographer, is back at her desk and reports having had a wonderful trip through the West.

MESSRS. T. A. SHIELDS, general clerk, and WM. SEIVERT, ledger clerk, are spending their vacation fishing.

MISS SADIE BUCHWALD has joined our organization as stenographer in the accounting department.

Members of the accident board, which consists of MESSRS. McLIN, HOWARD, SCANLON and TURLEY, went to Houston during the month in the interest of accident prevention.

MR. W. M. HOWARD, assistant claim agent, spent several days of August in San Antonio.

MESSRS. E. S. BURR and L. G. EUGLEY, of the Eastern Texas Electric Company Beaumont, were visitors to this company during the month.

The dengue fever, which has been prevalent in Texas for the past month, has claimed nearly every member of the accounting department for a short period. MR. R. G. CARROLL, manager, the latest victim, was taken to the hospital on August 22.

#### HALIFAX, N. S., AUGUST 25

The Retail Merchants' Association at the convention held this month in Prince Edward Island, reported that business is slowly but steadily improving and indications are that it will continue to do so in the future.

The gas department send-out shows an increase of 11 per cent and the power station out-put 14 per cent increase over the same period in 1921.

The city is still carrying on its street paving program. The company's track work on Coburg Road is nearing completion and the Belt Line Service has been resumed.

The unemployment office reports a slight improvement in general conditions over last month.

MR. H. VITTINGHOFF was recently in Halifax on matters pertaining to our gas department. Mrs. Vittinghoff accompanied Mr. VITTINGHOFF on this trip.

Four United States warships, the *Florida*, *Delaware*, *North Dakota* and *Olympia* were in Halifax for nearly two weeks early in August. In addition to the regular crews on these ships about 1,500 midshipmen were on board for their annual cruise. Halifax entertained the officers, midshipmen and men in a most generous manner, as some form of entertainment was provided for each and every day during the stay of the ships. On one day a battalion of midshipmen paraded under arms through the street and created a most favorable impression.

#### HAVERHILL, MASS., AUGUST 29

The general feeling throughout the shoe industry is that business is somewhat better than last year and that a larger fall trade may be expected. There seems to be a general belief that the shoe business is becoming somewhat more stabilized and that any gains which are made will be more dependable.

Retail business is not as satisfactory as merchants had hoped for, although it is generally admitted that conditions are more nearly approaching the pre-war status. The buying power of the shoe operatives is not so great as it was during the war and for this reason the general attitude is not optimistic.

In our last report we mentioned two apartment houses, one of which was under

construction at that time. Through lack of capital, work on these apartments has been discontinued. There does, however, seem to be some slight activity in the building of frame houses, although Haverhill is not enjoying the building boom noticeable in other cities.

Employment conditions are considered very satisfactory for this time of the year. There is, however, a controversy between the Boot and Shoe Workers' Union and the Shoe Workers Protective Union against the Winchell Company, which involves 900 operatives. This matter is now before a master and it is strongly felt that the Winchell Company will leave Haverhill if they do not receive a favorable decision. There is a matter also of renewing the peace pact which expires on January 1, 1923. The Union has refused to renew the present agreement and it is expected that the matter will be taken up by the Union and the manufacturers very soon.

MR. H. A. LEMMON, of the personnel division, was a visitor of our company one day during the month.

MR. H. T. EDGAR, division manager, spent a couple of days in Haverhill the first of August.

MR. NUTE, MR. DEXTER and MR. GILBERT, of the Fall River Gas Works Company, called on us on Friday, August 4.

MR. LANE, of the engineering division, has visited our plant twice during this month and is working up some very interesting data on the settling of our purifying house and hot water well.

MR. J. B. HAYES, secretary to Mr. M. L. SPERRY, called at this office during the month.

MR. and MRS. W. R. BELL spent a very pleasant vacation at Wanalancet, N. H.

MR. T. P. WALKER's family spent the first three weeks in August at Hampton Beach, N. H., occupying "The Ledgemere," Plaice Cove.

#### HOUGHTON, MICH., AUGUST 25

There has been practically no change in either the copper mining industry or the lumber industry as compared with the previous month. Both industries are operating considerably below normal.

Retail business is still not very satisfactory, and this condition is reflected in the wholesale trade.

Business of the lighting company holds up very well, in view of the general conditions in the district.

Building activity is limited. About the only work in progress covers repairs.

There is still a scarcity of underground labor in this district, and the wages at present in effect at the mines are not attractive enough to relieve this condition.

MR. JOHN P. KNAPP, of the engineering department, has returned from a two weeks' vacation spent at Chicago, Ill.

MISS ANNA LEARY, clerk in the Houghton meter department, went to Chicago and Milwaukee during the latter part of July on a vacation trip.

The inauguration of the weekly pass on the traction company's lines went into effect on July 24.

Copper shipments from ports on the Keweenaw waterway for July were 5,248 tons, as compared with only 3,263 tons a year ago. Eighty-five vessels passed through the waterway in July, 1922, as compared with 73 in July, 1921, and 55 in June, 1922. The total tonnage for July, 1922, was 163,050, as against 165,153 in July, 1921, and 116,557 in June, 1922.

MR. C. J. HARVIN, of the engineering division of the Boston office, accompanied



by Mrs. Harvin, arrived in Houghton on August 9, to calibrate the station and substation meters and also the meters of the large power customers of the Houghton companies. Mr. B. S. LUTHER, who also arrived in Houghton on August 9, will assist Mr. HARVIN in this work.

The Houghton office force motored to the Portage Lake Ship Canal on the evening of August 9, and reported a very pleasant time. The evening's activities consisted of a "wiener" supper and games. Mr. and Mrs. C. J. HARVIN and Mr. and Mrs. E. S. FITZ joined the party later in the evening.

Mr. W. H. BALCHE, of the Betterment Division of Boston, arrived in Houghton, on August 10.

Mr. ADDISON H. FINCH, chief clerk, is spending his vacation at Chicago, Detroit and Flint.

Miss AGNES BERNIER, lighting superintendent's stenographer, is enjoying a two weeks' vacation.

The marriage of Miss Mabel Rheault, of Dollar Bay, Mich., and Mr. HAROLD G. KITTO, student engineer at the Houghton Power Station, took place on August 17. Mr. and Mrs. KITTO left on the *Tionesta* for an extended wedding trip through the east. Upon their return, they will make their home at Houghton.

A basket lunch with all the trimmings—ice cream, cake, coffee and cigars; a big league baseball game between the Traction Company and the Lighting Company, and a dance in the Electric Park pavilion, proved a most successful meeting of the L. & T. Club on August 17. About 250 members and friends took part in the evening's outing and enjoyed every minute. STANLEY FRANCIS, president of the Club, and his committee, composed of DAVID POLMEAR, GEORGE HONOLD and THOMAS MACMILLAN, were found guilty of serving the best luncheon that the club has attended for some time. The baseball game was won by the Lighting Company's team, 7 to 4. Some of the plays were spectacular. The game was tied at 2 until the sixth inning, when a crowd of the fair ones started to root for the Electrics. The Traction then gave up all hope. At the dance in the pavilion, the Twin City Orchestra played the pep numbers that made all the old young again for the rest of the evening. The pavilion was beautifully decorated with American flags and bunting.

Miss MARGUERITE ROHLMAN, of the sales department, left on August 19, for Wakefield, Mich., where she is spending her vacation.

Mr. A. F. REES, attorney, and Mr. S. B. TUELL, receiver, left for Boston on August 20.

The Isle Royale Copper Company has recently declared a dividend of 50 cents per share.

The village of Houghton and the Standard Oil Company have recently acquired property at Franklin Street curve, and work is now under way making this curve less abrupt and less dangerous. The Standard Oil Company proposes to erect a modern filling station at this location.

#### HOUSTON, TEX., AUGUST 25

The post office receipts for the year ending June 30, amounted to \$1,297,745.

The city council has passed an ordinance for the construction of the Bayshore Ship Channel interurban line.

The Houston Ship Channel has been awarded an appropriation by the Federal government, to be used in deepening the channel to 30 feet, from the Turning

Basin to Clinton. This will make the port accessible to the largest vessels in coast-wise or foreign service.

The port of Houston exceeded all previous records in exports of cotton to foreign countries during the fiscal year just closed; a total of 477,141 bales being shipped to European ports. Gross receipts for the season were 2,569,590 bales while the net receipts amounted to 1,163,673 bales.

Building permits for July totaled \$1,624,373, while the total value of permits issued for the first 15 days of August amounted to \$340,000.

More than \$800,000 of the \$1,200,000 worth of improvements authorized last January for the extension of the Houston Electric Company's franchise as granted by the city council, has been expended, or is being spent, in improvements and extensions to the company's lines.

Committees from the Houston Cotton Exchange, the Merchants' Exchange and Chamber of Commerce are formulating plans to petition the Harris County Navigation Board to make improvements amounting to more than \$3,000,000 at the Houston Turning Basin. Included in these will be a municipal grain elevator to cost not less than \$100,000, with a minimum capacity of 1,000,000 bushels.

The East bridge across White Oak Bayou on Heights Boulevard has been completed and construction on the west bridge will begin immediately.

Work on construction of the new \$600,000 Methodist hospital will be started before September 1. The contract for the first unit to cost between \$125,000 and \$150,000 has been awarded.

Due to the slump in building activities jobs are very hard to find in Houston at the present time, with the exception of cotton pickers and wood choppers.

MR. V. W. BERRY, of Fort Worth, was a visitor in our city.

MR. R. G. TABER, of the construction division of Stone & Webster, was in town looking over the Heights substation.

MR. G. S. BRUSH entertained the supervisory force of the transportation department with a picnic in Galveston.

MESSRS. McLINN, SCANLON and HOWARD, of the Galveston Electric Company, visited our office.

MR. G. G. MORSE entertained the office force with a picnic in Galveston.

MR. L. C. BRADLEY has returned from a vacation spent in the east.

MR. and MRS. R. T. WRIGHT announce the birth of a ten-pound baby daughter—Dorothy Carolyn—on August 13.

MR. W. E. WOOD left for a short trip to Colorado.

MR. H. L. HARDING has returned from a vacation spent in Boston and Maine.

MR. C. A. BRANN has returned to Houston after spending a short time in El Paso.

MR. F. J. BENNETT has gone to Colorado and will return with Mr. Wood in a few days.

#### JACKSONVILLE, FLA., AUGUST 21

The managers of the Southeastern district met here, to arrange for their share of the program at the Managers' Conference in Boston in October. It was decided to hold these meetings at Atlantic Beach, and the business of the meeting was interspersed with surf bathing and sight-seeing trips to the different beaches. Those in attendance were: MR. T. L. SMALL, Baton Rouge Electric Co.; MR. R. M. HARDING, Columbus Power Co.; MR. B. L. GROOMS, Key West Electric Co.; MR. J. G. HOLTZCLAW, Pensacola Electric Co.; MR. R. C. BROOKS, Savannah Electric & Power

Co.; Mr. T. J. HANLON, Tampa Electric Co. and Mr. J. P. INGLE, Jacksonville Traction Co., as well as Mr. E. J. TRIAY, receiver of the Jacksonville Traction Co.

Mr. C. E. O'LEARY, trip sheet clerk in the accounting department visited his people in Boston during his vacation.

Miss DONNA BOYETT, stenographer to the assistant treasurer, drove down to Tampa with her mother and sister during her vacation.

Mr. F. M. MARTZALL, purchasing agent of the Savannah Electric & Power Company, formerly occupying a similar position with this company, spent part of his vacation in Jacksonville.

Mr. F. C. MORTON, formerly safety first man with the Jacksonville Traction Company and now secretary to Mr. R. C. BROOKS, manager of the Savannah Electric & Power Company, spent part of his vacation here.

Mr. J. P. INGLE was a guest at a dinner given by the St. Augustine Rotarians at St. Augustine, Florida, during the month. He was accompanied by Mrs. Ingle.

An interesting occurrence during the month was the fish fry for the employees given on the wide lawn across the street from the carbarn on Riverside Avenue. Lights were strung between the enormous oaks on the lawn and fried fish, rolls, coffee, etc. were served. A unique feature of the evening's entertainment was the radio concert and between musical numbers there was broadcast a message from Mr. INGLE himself, welcoming the men and urging co-operation on the part of the employees and the public.

KEOKUK, IA., AUGUST 28

#### *Keokuk Electric Company*

Taking into consideration the strike situation during the past month we feel that our industries have operated on a very good schedule. In some cases certain plants were obliged to curtail their operation on account of the coal shortage, but at present most of them are doing exceptionally well. The Purity Oats Company, Iowa Fibre Box Company, Standard Four Tire Company and United Lead Company (aside from their carbide department) are all operating full capacity. The E. I. Du Pont de Nemours Company, who for several months have been practically closed down are now operating at about three-fourths capacity. The demand for their product, namely, black powder, comes almost entirely from mining districts. They inform us that orders are now coming in as a result of some of the mines having resumed operation.

The local freight offices of both the Wabash and C. B. & Q. Railway advise that the volume of freight business for August will show an increase over July and over August of last year.

During the past month our wholesale grocers have experienced some difficulty in securing large shipments of various staple goods. Their largest business at this particular season is in materials used for canning and their difficulty in securing delivery in this particular line has seriously handicapped them in keeping up with their orders. The wholesale hardware business will show a nice increase over the previous month and August of last year.

Business among our retail merchants has held up fairly well although the fall trade among clothing and dry goods concerns is rather slow in opening up.

The total kilowatt hour output for the first 24 days in August show an increase of approximately 110,000 over July, and 55,000 over the corresponding month of last year. Our gas send-out for the same period is approximately 400,000 cubic feet over July, and 600,000 cubic feet over August of last year.

Aside from several new residences now at various stages of construction there is considerable repair and remodeling work now in progress, including the Hippodrome Theatre and one department store.

The labor situation in this locality has not been seriously affected by the present strikes except that some concerns were obliged to shut down for a short period at some time during the month. We are advised that there is a shortage of carpenters and building trades men, and that the E. I. Du Pont de Nemours Company are now looking for suitable men for their employ.

MR. J. L. ALEXANDER, manager, was heartily welcomed on August 25, by the employees of the Keokuk Electric Company and his many friends, after having spent three months in the East on account of illness.

MR. H. C. VITTINGHOFF visited this company on his inspection tour of western properties.

MR. O. L. REISER, chief clerk, is now spending his vacation in Nebraska.

MR. W. L. CLEMENTS, cashier, is enjoying a two weeks' vacation in Cedar Rapids.

MISS F. M. SPEARS, of the sales department, is now spending her vacation in Wisconsin and Chicago.

MR. SILAS BRANT, utility man, a veteran employee of this company, is confined to his home recuperating from a slight stroke of paralysis.

MR. G. W. CARLSON, electric superintendent, has returned from a ten days' camping trip with Battery A of this city. MR. CARLSON is a first lieutenant in this organization.

The Annual High Tension Club picnic was held at the Hancock County Auto Club on July 27. The offices of all the Stone-Webster properties in this vicinity were closed for the afternoon in order that everyone could attend. This was one of the best picnics ever sponsored by the club. A series of aquatic events including fancy diving, racing, canoe tilting and other sports was carried out and the winners presented with beautiful prizes. For those who did not enter in the water sports, various other means of entertainment were provided, including dancing, tennis and boating.

#### *Mississippi River Power Company*

MR. HARVIN, of the Betterment Division of the Boston office, visited the Power Company, August 4, 5 and 6.

C. A. SEARS, manager, was a business visitor in Peoria and Springfield, Illinois, and St. Louis, Missouri, during the early part of the month.

MR. N. T. WILCOX, sales manager, returned August 7 from Association Island, Henderson Harbor, N. Y., where he attended the annual meeting of the Edison Sales Managers' Association and Executive Committee meetings of the Commercial section of the N. E. L. A.

One of the best picnics which the High Tension Club has sponsored was the one which was held July 27, at the Hancock County Motor Club, and which was participated in by members of the organization and their families, from Keokuk, Fort Madison and Hamilton, and other points in this division. The fun started early in the afternoon, and there was something for the amusement of everyone. The athletic program was composed entirely of water sports, and there were all kinds of races and tests of aquatic skill. Everything from a tub to a canoe was utilized, and besides these novelty events in the water there were swimming races, diving events and general all around water sports. During the afternoon there was dancing in the club house, and at supper time a sumptuous picnic supper was served. The

members and their guests were seated in groups about the club house and the lawns. Soda pop and ice cream was served all during the afternoon and evening. Dancing was enjoyed until late in the evening. Special cars from Keokuk and Hamilton carried the guests home.

The picnic was one of the most largely attended affairs the club has given, and as usual was one of the most successful in the club's history.

#### KEY WEST, FLA., AUGUST 25

During the past month the cigar industry has shown quite an improvement. Fully 200 additional cigarmakers were given employment during the month. The Santaella Cigar Company of Tampa, Florida, opened their branch factory on August 8, and are now working a force of 125. The Havava-American Cigar Company, which has been working approximately 100 cigarmakers for the past six months, has increased its forces to 150 during the past month. Activities in the sponge and fishing industries during the month were not quite as good as usual.

Wholesalers and retailers report no noticeable change in business during the past month.

Railway receipts for the first 25 days of this month show an increase of approximately 14 per cent over the receipts for the corresponding period of the previous year. On account of the increased activity in the cigar factories, we began the operation of an extra car on the 22nd of this month.

Lighting earnings compare favorably with the previous month's earnings and continue to show a small increase over the estimate.

There were but few real estate transfers reported during the past month. Building activities during August were about normal. Permits were issued to cover two new buildings at a cost of \$5,600. Also there were several permits issued covering additions and repairs amounting to approximately \$14,800.

MR. LESTER H. FONTAINE has resigned his position as ledger clerk and returned to his home in Belmont, Massachusetts.

MR. TALLMADGE CONOVER, electrical engineer, returned from a month's vacation spent at his home in Seattle, Washington.

MR. GEORGE MONTICINO, office boy, spent two weeks during the month at the Boy Scouts' Annual Encampment at Orlando, Florida.

The Key West submarine base, capable of berthing 50 of the largest undersea craft, constructed at a cost of \$1,650,000, has been completed and turned over to the Navy Department.

A smoker was held after the regular meeting of the Benefit Association at the meeting room August 11. The evening's entertainment consisted of various musical and vocal selections, several recitations, and a good bit of comedy. MR. J. H. MONTICINO and MR. HARRY GREGORY displayed unusual talent in their one act play "Hungry." A quartette composed of MESSRS. MESA, KERCHHEINER, WELCH and KEY, handed out a real surprise with their song "The Old Oaken Bucket When It's Full." Refreshments were served during the evening. A good attendance was on hand and everyone described the meeting as being the best yet.

#### LOWELL, MASS., AUGUST 23

The textile industry is experiencing little difficulty from unsettled labor conditions in this city and practically all the mills are running at least part time, although none are supplied with a large quantity of orders. The Bay State Cotton Corpora-

tion, manufacturing tire fabric, temporarily has increased its production and the Appleton Company, manufacturing cotton goods, has a reasonable number of orders at hand and is operating under nearly full schedule. The other Lowell mills are operating either several departments or all departments depending on the number of orders at hand, and there is no suffering among the unemployed at this time.

Mercantile establishments report a normal volume of trade at the present time with a tendency to sell a larger quantity of material at lower prices than during the previous year and on the whole feel that conditions are reasonably satisfactory.

The gross revenue of this company shows a slight increase over the previous year with the tendency for continued gradual improvement during the immediate future. The load on power station is somewhat in excess of the load during the past year, the maximum for the month being 10,000 kilowatts and the kilowatt hour output for the month of July being 2,644,126 kilowatt hours.

Appliance sales for the month of July resulted in an increase over corresponding month previous year, and this department shows a very slight apparent estimated profit.

There were a few more building permits issued in the city of Lowell during July in 1922 than were issued during the corresponding month last year, but the only erection of new buildings is for homes and other building activity is confined to remodeling both in homes and in commercial buildings, and added to this is the building of garages by the home owners throughout the territory, all resulting in somewhat greater activity than during the past.

The labor situation in Lowell and surrounding territory is very much unsettled and there are many strikes which continue to be in force, but which do not seriously handicap any of the industries in their operation.

MR. EVERETT T. REED, chief engineer, is spending his vacation at York Beach, Maine.

MR. ALAN M. PAINTEN, of the electrical department, has resigned to accept a position with the Westinghouse Electric and Manufacturing Company in their Bangor, Maine, office.

The outdoor sub-station of the Abbot Worsted Company in Forge Village is under construction and is to take care of an additional load of 500 horsepower, the total capacity to be 1,000 kilowatts.

MR. ARTHUR MATTHEWS, of the electrical department has returned from a two weeks' automobile trip through the western part of Massachusetts.

MISS HELENA M. SHARKEY, of the sales department, spent her vacation in Farm Point, Quebec.

The golf enthusiasts of the company are anticipating with much interest the second annual L. E. L. golf tournament which is soon to take place at the Mt. Pleasant Golf Club.

MISS EVELYN A. WILSON is at York Beach, Maine, for a two weeks' stay.

MR. RAYMOND G. CUSTER, of the sales department recently returned from a trip to New York City where he spent the greater part of his vacation.

Work is under way for extensions to the ornamental White Way street lighting system, nine lights to be installed in the Lucy Larcom Park and 27 on East Merrimack Street between Paul T. Kearney Square and the Lowell Memorial Auditorium.

MISS GRACE M. MURPHY, of the accounting department, has returned from her vacation which was spent in automobile trips to New York City and other places.

## MIDDLETOWN, CONN., AUGUST 24

The Brainerd, Shaler & Hall Quarry Company is busy on a contract for brownstone to be used in the construction of the Roosevelt Memorial. The first part of this month they were successful in moving a huge block of brownstone weighing approximately 6,000 tons in one blast.

Wholesale and retail grain dealers report a decided increase in business. The peach crop is the largest and best in several years.

Work on the power line of The River Feldspar & Milling Company is progressing satisfactorily. We are receiving numerous requests for extensions in the outlying sections served by this company.

The town of Middletown has recently taken over three new streets in what is known as the "Trench Hill Section." This property is being developed by the Middletown Homes, Inc.

MR. A. A. PACKARD has been appointed local manager of the Middletown division.

MR. H. A. HIPPLER, formerly of the New London division, has taken over his duties as general superintendent of the Middletown division.

MESSRS. BIRD, TRULL, KEBBE and CURRAN were visitors in Middletown this month.

MISSSES SMITH, KALESZ and PARMELEE enjoyed a vacation during this month.

MR. PACKARD has returned from a fishing trip in northern Vermont and Canada.

MESSRS. JONES and BOLTON, of New London, were visitors in Middletown.

The employees of the Middletown division are looking forward with great pleasure to the annual picnic which will be held at Gales Ferry, Tuesday, August 29.

MR. PACKARD attended the National Safety Convention in Detroit which was held from August 28 to September 1, inclusive. He was also present at the New England managers' meeting at Pawtucket, R. I.

## NEW LONDON, CONN., AUGUST 25

Industrial plants in New London are all very active. The Babcock Printing Press Company has added 25 or 30 men to its forces. The Edward Bloom Company, silk mill, has built a large addition and the New England Carpet Lining Company has enlarged its factory on Water Street.

In Waterford, at Quaker Hill, an old mill is being repaired and made ready for business. We expect to connect about 100 horsepower at this mill.

The fruit and vegetable crops have been good this year and retailers are having their usual summer trade.

The earnings of the New London division of The Connecticut Power Company show an increase over last year in both electric and gas departments. Kilowatt output increased 34 per cent and gas send-out increased 8.5 per cent. Numerous short extensions are in progress.

Many homes are being built this summer and a great number of small garages. Two factories have built additions.

Good labor is scarce due to much road construction which is being done this summer.

MR. H. A. HIPPLER has been transferred to the Middletown division where he is now superintendent.

An informal picnic was held on July 29 at Gardner's Point. Members of the CoPoCo Club left New London by automobile after work and enjoyed sports and

basket lunches during the afternoon. In the evening the party moved to Riverbend Casino and enjoyed dancing.

The annual outing will be held August 29 at Brown's Crossing on the banks of the Thames River. A very fine program has been laid out and every one is looking forward to a banner time.

#### PADUCAH, KY., AUGUST 25

Generally, business feels the effect of the idleness of approximately one thousand strikers in the railroad shop crafts here. Tobacco sales for the month have been very light. Weather conditions, however, have been ideal for tobacco growing and local farmers are quite optimistic over the prospects for this year's crops.

Prices on all grades of lumber remain firm and in some instances there has been a slight increase. Twenty new houses have been built in Paducah this summer and others are in process of construction.

The Claussner Knitting Mills, with a capitalization of \$100,000, has been organized by local business men to manufacture full-fashioned silk hose. They have purchased a building on South Second Street and expect to begin operation about October 15. This plant is to include electric drive and the load will be approximately 50 kilowatt. This new industry will give employment to approximately fifty people at the start.

The Illinois Central Railroad have placed orders for additional equipment in their shops here and they will increase their present load approximately 250 kilowatts.

As the result of the coal strike in other fields, the West Kentucky mines have been working to full capacity and this has increased the movement of coal through Paducah far ahead of anything the Illinois Central Railroad has ever experienced. In order to handle this increased traffic they are building several miles of additional track near the Island Creek district.

Preliminary work on the city's \$500,000 sewer construction project is under way. The contractor has several working units on the ground and actual excavation will start in a few days.

Postal receipts show a gain of at least \$20,000 over last year. Receipts for the first six months of 1922 will exceed \$64,000.

New machinery is being installed daily at the International Shoe Company's new plant and when in full operation they will employ approximately one thousand workers. Their demand increased this month from 240 to 280 kilowatt and when under full operation will exceed 300 kilowatt.

The new planing mill of the King Mill & Lumber Company is now in operation and connected to our lines, with a connection load of approximately 25 kilowatts.

The Cohankus Manufacturing Company is shut down temporarily, due to their inability to obtain sufficient cotton.

The Paducah Hosiery Mills is shut down for a few weeks in order to make some changes and repairs to their machinery.

The City Consumers' Company is drawing plans for the construction of a 60 or 75 ton per day raw water ice plant, to be located somewhere in the southern part of the city where they can obtain rail connection, to supply the wholesale trade. They are considering electric drive with synchronous motors, with a connected load of approximately 200 kilowatts.

The Paducah Box & Basket Company are working to full capacity in an effort



to meet the large demand for their product, caused by the unusually large fruit crop this season.

The Nagle Canning factory have obtained coal under priority orders and are working a large force of men canning tomatoes.

Wholesale dealers report business conditions for August to be on about the same level as July.

Retail merchants are holding mid-summer sales now and this they claim is tending to offset the slight slump in purchases, caused by the strike.

The recent sudden death of Mr. Henry Rudy, the active head of J. A. Rudy & Sons, large retail store here, has taken from the community one of its most popular and active business men.

There have been in the neighborhood of 20 building permits issued during the last few weeks for both new construction and repairs.

MR. ROBERT L. GIFFORD, gas superintendent, is visiting relatives and gas companies in the east.

MR. PEARCY QUINN has joined our organization as general bookkeeper.

MR. DAVID DALY, district manager, visited these companies during the month.

MR. HORACE WILLIAMS, of the accounting department, was married during the month to Miss Frances Leake, of this city.

MR. J. W. SHEPHERD, of the distribution office, has been transferred to the general office.

Four members of our organization took prominent parts in a presentation of "The Mikado," given at the Orpheum Theatre under the auspices of the Women's Club, on behalf of the Scholarship Fund.

MR. A. S. NICHOLS, manager, with a party of prominent citizens, recently spent a day up the Tennessee River on Mr. NICHOLS' launch, the *Electra*.

PAWTUCKET, R. I., AUGUST 23

#### *Blackstone Valley Gas and Electric Company*

While there has been some improvement in the condition of business with local industries during the past month, there has been no decided change. The railway and miners strike are probably having an indirect effect on local concerns. There is some improvement with the cotton industry. Jenckes Spinning Company are operating about 80 per cent of normal and from the indication of power taken by J. & P. Coats their business is fairly satisfactory.

Business with the machinery manufacturers still continues to be good, and the nut and bolt business has also shown a decided improvement.

There are indications of a slight improvement in the woolen and worsted industries, but very little improvement in the silk business.

Local retail merchants report that their business is not good.

While the company's business shows a decided improvement over the business of several months ago, there has been no marked change during the past month. We feel, however, that conditions will be somewhat better during the latter part of the year. Some of our large power customers seem to be doing good business. The Crown Manufacturing Company load has reached 1,650 kilowatts and Waypoet 1,450 kilowatts which is the maximum on record. J. & P. Coats Company were shut down for a period of ten days during holidays and while making repairs, but have now started up taking 4,000 kilowatts in the daytime and from 2,800 to 3,000 kilowatts at night. We have secured a new contract with

the H. & B. American Machine Company for 1,000 kva. which will about double their present load on our system. We have also secured a number of small loads—the Union Wadding Company 134 kva., Pawtucket Manufacturing Company 200 kva. and the Rhode Island Glass Work 250 kva. Since January we have taken in our power division 2,400 kva. of new business.

While there has been considerable activity in real estate and residence construction, there has been no large developments in building.

There has been no change in the labor situation.

MR. DAN LENNON announces the birth of a son, John Stephen, on July 28.

MR. W. I. STURTEVANT has returned from a six day fishing trip to the White Mountains.

MR. GARDNER ROGERS has left for two weeks' vacation at his summer home on Buzzards Bay.

MR. EARL MILLIKEN, assistant manager of Blackstone Valley Gas & Electric Company, has returned from a month's vacation at Sidney.

MRS. F. B. MARTIN, formerly with the Lynn Gas & Electric Company, has come with this company to take charge of floor sales in our merchandise department.

Mr. Henry Edward Richards, instructor in the North Western University, has been spending the past month perfecting a safety organization in our company.

#### *The Pawtucket Gas Company*

There is very little change in general business conditions. Most of the mills have secured sufficient help to fill their orders. The manufacturers report that August is always quiet and quite a number of mills have closed for a period of a week or ten days in order to make the necessary repairs. Many of the mills are running on a full day schedule and in some few cases night shifts are being worked.

The silk people state that the recent flurry has died out and orders are very few, but look for a revival by the middle of September. The cotton market is dull and quiet. Manufacturers generally are optimistic and expect large orders as soon as the vacation season ends. The workers in brass and steel report a marked improvement in the number of orders received.

The Bryan-Marsh Company and the Rhode Island Glass Company report good orders.

Wholesale and retail merchants report an increase and expect with the general improvement in the strike situation to see very much more satisfactory business.

The outlook for a large increase in both the sale of gas and electricity is excellent. There is a great shortage of fuel and in the opinion of the coal dealers it will be impossible to obtain sufficient fuel to supply all demands. Consequently, there will be a big demand for gas appliances of every kind, particularly in heaters. We understand that quite a number of our manufacturing concerns who realize that it will be impossible to supply their mills, due to the shortage of coal, have already made inquiries as to the possibility of being supplied with electric power.

There is no let up in the activity of the real estate market. Some very heavy purchases have been made by M. J. Gallagher & Company, who have recently bought a large portion of the land holdings of the late Frank A. Sayles. These lots are to be sold immediately and as they are in the most desirable portion of the city, there is no question but what many buildings will be erected thereon.

The building trade is very active. Quite a number of the larger concerns are planning large additions to their present buildings, and the number of dwelling

houses and garages show a marked increase over the corresponding month of a year ago. The building inspector reports 22 permits issued, amounting to \$298,300.

PENSACOLA, FLA., AUGUST 25

The local plant of the American Agricultural Chemical Co. will open operations on September 1, after a complete shut-down of nearly three years. This plant affords steady employment to between two and three hundred men.

The Weis-Patterson Lumber Co. is now putting out their normal output of cypress lumber and is shipping from five to ten carloads of material per day. This plant has just completed the construction of a dry kiln with a capacity of 75,000 board feet and when it is in regular operation their shipments will increase. They have also just completed a planing mill with a capacity of 50,000 feet per day to handle their business in the line of dressed material.

The Bruce Dry Dock has been active during the past month in the repair of vessels.

Conditions remain satisfactory in the agricultural districts contiguous to Pensacola and the wholesale houses report satisfactory summer wholesale business.

Turpentine and rosin industry in the country is active and labor is finding employment in the turpentine camps far better than for several years.

There is not much change in retail business conditions. Merchants report fair trade conditions, but not up to expectations.

Location changes are still being noticed and it is interesting to note that the business center is moving north on Palafox Street.

The condition of the company's business is satisfactory and its outlook for the future is brighter than ever before. Passenger receipts are holding up as compared with the previous months and freight business is very good. The operation of Birney cars will be commenced in September, at which time service in both directions around the East Hill will be inaugurated.

Light and power business has been very good for some months and is bound to increase in the immediate future. The Naval air station has come on our lines for their full power requirements. The Pensacola Shipbuilding Co. has decided to close down its power plant and use our current for their entire operation.

There have been no real estate transfers of importance during the month. Real estate deals which are brought about are of minor consequence in every respect. There have been no building activities except in the line of residences and there seems to be no end to this class of construction.

Construction work on the Gulf Beach highway has been held up some by inability to secure rolling stock, but it is stated that this is progressing as satisfactorily as could be expected under the conditions. The county commissioners expect to let contract within the next few weeks for additional highway to the extent of six or eight miles.

The almost normal activity in the various industries in Pensacola has had a splendid effect on employment conditions, augmented by the construction work on the numerous highways and street paving jobs. The United States Naval Air Station has recently put on 120 permanent employees and are advertising for more. This is brought about by the institution of land plane practice at this station and is permanent in its nature.

MISS JANET FOSTER, who has been with the company for quite a while as stenographer in the accounting department, has left the organization to go to school in Shelbyville, Tenn. During the time of her employment she made many friends

in the company all of whom regret her decision to leave. Several days before she departed she was the guest of honor on a bay party, given by all the office employees and the department heads and their families at Saufley Beach, and on her departure she was presented with a beautiful silver pen and pencil set as a token of esteem in which she was held by the employees of the company.

MR. W. C. TETE, Bayshore freight agent, has returned from a two weeks' vacation.

Miss JANE YOUNG, of the accounting department, has returned from her vacation.

MR. STANLEY WOLFE has recently entered the accounting department in the capacity of bill clerk succeeding Miss AGNES KERLE who left the employ of the company in August.

Miss Kirk Gibbons, of Tampa, is the guest of her sister, Mrs. H. I. Shannon, at her home on North Barcelona Street.

MR. F. A. KRONER, of the General Electric Company and Mr. Thomas, of the Safety Car Devices Company, are spending some time in Pensacola in connection with the inauguration of our safety car service and the training of our operators.

MR. CLARENCE B. MELTON, chief clerk, has been elected president of the newly organized Junior Chamber of Commerce. This body is composed of the younger business men of the city and is subsidiary to the Pensacola Chamber of Commerce.

#### PONCE, P. R., AUGUST 22

Activity in the industrial and commercial fields of the island still remains low, as this is the off-season for sugar, coffee and tobacco, which are the principal crops in the vicinity of Ponce. It is thought that one of the largest tobacco factories in Ponce will begin operating on a 50 per cent basis sometime in September. If this condition comes about it will be the first real manufacturing of cigars which has been done in Ponce since January, 1921.

The local wholesale and retail business in Ponce is very inactive at this time, there being practically no wholesale shipments of either sugar or coffee. The retail merchants find that there is sale only for absolute necessities.

There are very few real estate transactions at this time and many residences are vacant due to the fact that during the summer months when schools were closed many people moved with their children to the country. There is very little building of small houses going on at this time. Recently construction on one bank building and one commercial house has been started.

There seems to have been quite a decrease recently in common labor rates. It is estimated that common laborers in the sugar fields will be paid \$1.00 per day for this year's crop, whereas it has been nearly \$2.00 per day.

There have been quite a good many showers recently, which have aided considerably the irrigation of fields where sugar and other products have been planted. Also these showers have been sufficient in number to partially fill the rivers which have been dry for many months and consequently we have been able to secure a good deal of water from the river for condensing purposes at the station.

MR. HARRY A. WALSH, engineer at the power station, left San Juan, August 2, for a six weeks' vacation in the states. MR. WALSH has been in Ponce since November, 1920, and expects to return about the first of September.

On August 11 MR. REGINALD BURR arrived from the States to take up the

duties of assistant to the superintendent, which position has been filled by Mr. FRANK A. TRACY who left for the States on August 16. Mr. TRACY has been with the company in Ponce since November, 1920, and was well liked by all of his associates. He will be married shortly after his arrival in the States to Miss Gladys Phalen.

We were recently visited by Mr. L. E. GOWLING, who is now with the Havana Electric Light Company. Mr. GOWLING was a former chief engineer in our power station.

Construction has been started on a new bank building for the Credito y Ahorro Ponceno. This will be a magnificent structure facing the Plaza and will cost approximately \$60,000.

#### RENO, NEV., AUGUST 29

The local business houses report no material change in conditions. Prices are holding about the same, although the wholesale price on some commodities has been advanced, but the increase is not expected to hold.

The railroad strike condition in Sparks has not changed. It is stated that enough men are now employed to take care of all necessary repair work and to date there has been no cancellation of any trains.

Shipments of lambs to eastern markets from the northern Nevada ranges have been quite heavy during the past month.

The federal judge, who has the company's gas rate case under advisement, is going to San Francisco for at least three weeks to assist the judges of the Federal Court there to clean up their overcrowded calendars. The possibility of receiving an early decision does not look very promising.

The Pacific Fruit Express Company's ice plant at Sparks is now operating at full capacity and it will continue to do so for another month and possibly longer.

The power demand of the United Comstock Mines Company is increasing as they are now testing out the large motors on the ball mills and crushers.

The real estate market continues dull with very little transfer of property. Building of small houses is being carried on quite extensively. The construction of two large garages is underway and the addition to the Golden Hotel is being pushed as rapidly as possible.

There still continues to be a shortage of labor for the farms and ranches. There are numbers of men around the towns who will not work unless forced to it. Practically all of the striking shopmen have found work either in the hay fields or in the lumber camps.

MISS VERA RIES, who was a clerk in the engineering department for the past two years, was killed in an automobile accident on August 3. She is greatly missed by the entire office force. Miss BESSIE JONES, who has been on the switchboard during the summer, has taken Miss RIES' place.

MR. WENTWORTH is spending his vacation at Santa Cruz, Cal., where he is enjoying the surf bathing, also spending some time at Del Monte, where there is a very fine golf course. He is expected back about August 28.

MRS. LEEPER, stenographer, has returned from her vacation spent at Santa Cruz, Monterey, and San Francisco, and Miss PORCHER, also stenographer, left Saturday for Portland, Ore., to spend her vacation.

MISS LEONA METZGER, ledger clerk, is now on her vacation and is expected back at the office about the first.

Mr. H. VITTINGHOFF, gas engineer from the Boston office, arrived in Reno on August 23, and expects to be with us for at least a week.

Mr. CLIFFORD, sales agent, is leaving for San Francisco on August 24 to attend the commercial section meeting of the Pacific Coast Gas Association.

Mr. RALPH SMITH, who has been foreman at the Washoe power house for several years, has been transferred to Reno as head of the mechanical department, and Mr. HARRY BEERS has taken his place.

Mr. BUSTER BROWN, who has been operating at the Washoe station, has been transferred to the Farad power plant as foreman.

Mr. CAMPBELL is in San Francisco on business and expects to be back on August 28.

#### SAVANNAH, GA., AUGUST 25

No noticeable improvement in the industrial situation in Savannah characterized the month. The depression which has existed in Savannah for a considerable period continues with very little change, although there are some indications that the fertilizer factories, which have been practically at a stand-still, will gradually resume operations in the near future. The sugar refinery has continued operations at capacity but the Diamond Match factory was obliged to curtail its business because of conditions arising from the railroad strike. Although the coal situation in Georgia is bad, a number of the local industries burn oil and are therefore not effected by the strike in that respect.

There is a gratifying amount of activity in the shipping industry in Savannah for this period of the year. The Naval stores exports practically equal the shipments for the same period in 1921 and lumber shipments show a big increase over last year.

The custom receipts for July, 1922, amounted to \$665,735 or nearly double those of the previous July but, however, less than the receipts of June, 1922.

The post office receipts for Savannah for the month of July, 1922, amounted to \$34,826 and show an increase of 4 per cent over the same month last year.

The cotton market continues steady. The Naval stores market remains somewhat quiet. The cotton receipts for the 1921-1922 season ending July 31, 1922, indicate slightly better conditions during that season in comparison with the previous season. The total receipts of cotton during the 12 months ending July 31, 1922, amounted to 762,681 bales as compared with 738,863 bales during the 1920-1921 season.

Except for the increased retail business due to the summer clearance sales local wholesale and retail merchants report very little business.

The Birney safety cars are operating satisfactorily on both the Habersham Street and the A. & B. Belt Lines and although a slight falling off of travel occurred on the Habersham Street line, the riding on that line still shows a considerable increase over the period prior to the introduction of the safety cars.

Our plant production which is considerably below that for the corresponding period in August, 1921, clearly indicates the continued curtailment of the local industries. This condition has been further accentuated recently by the unseasonable cool weather influencing the power consumption of the ice factories and the city water pumps.

There has been considerable activity in the real estate business during the month, several important transfers of business property having been made. During the month of July 67 building permits were issued valued at \$164,500. Although this valuation was exceeded in July, 1921, the total value of building permits

issued during the seven months of this year is larger than for the same period in 1921.

There has been no apparent reduction in the number of unemployed in Savannah, while several employees of the Diamond Match Company have been temporarily forced out of work, due to the closing down of that plant.

Mr. R. C. BROOKS, manager, attended the meeting of the managers of the Southeastern district which was held in Jacksonville, August 24, 25 and 26.

Miss OCTAVIA BECKHAM, stenographer in the sales department, has returned from her vacation which was spent in Hendersonville, N. C.

Mr. V. E. ABBOTT, chief clerk, and W. B. NEWELL, of the engineering department, left on August 19 to spend their vacations at their homes in Maine and Massachusetts respectively.

With an attendance of about one thousand, composed of the employees, their families and guests, the Savannah Electric Benefit Association held its twelfth annual outing at the Country Club on August 3. The girls and boys from all of the orphan homes in the city were invited as guests, about one hundred and sixty being present. This outing proved to be a very enjoyable affair, although a few of the sports had to be dispensed with at the afternoon session because of a heavy shower.

The outing was held in two sessions to enable all employees to have the privilege of attending either one or the other. Athletic contests, music and dancing, Punch and Judy show for the children, ball games and, finally, a sell-prepared dinner were the features of the event. The lemonade barrel attracted a great deal of attention and 350 gallons of lemonade were consumed during the day.

The morning baseball game between the transportation department and a team picked from all other departments resulted in a 6 to 4 victory for the transportation men. The morning 100-yard dash was won by WILLIAM BRAY, motorman, while the afternoon contest was won by C. H. HERRICK, secretary to Mr. Foss. The fat man's race was won by J. BAZEMORE, inspector, W. M. PENDER, trainman, coming second. The rope throwing contest for height and accuracy was won by W. T. SNEED, station electrician, W. P. SMITH, line foreman, coming a close second. The tug of war, relay race and afternoon ball game were called off because of the weather.

Mr. F. M. MARTZALL is spending his vacation at his home in Jacksonville, Fla.

Mrs. G. A. GLOVER is filling the position of telephone operator in the absence of Mrs. GERTRUDE BROWN, who is enjoying a two weeks' vacation.

The Connective Club, composed of members of the line, power and underground departments, enjoyed a dinner on the evening of August 25, in the line department building.

On August 17, the baseball game between the transportation department, and all other departments which was postponed from the outing, was played off. This game was won by the transportation department with a score of 7 to 4. The transportation team was under the leadership of E. L. BROWN, inspector, while A. F. SOLMS, claim agent, acted as manager of the all other department team. W. H. KENNEDY, assistant treasurer, displayed his ability as umpire at this game.

#### SEATTLE, WASH., AUGUST 24

Lumbering continues excellent. There was a slight drop in production due to forest fires, but conditions are again normal. The cut for the first six months of 1922 exceeded all but one, over three billion feet being cut—valued at \$70,000,000.

Fishing conditions are bad, the local salmon pack being the smallest on record. The Alaska salmon pack is considerably better than the local pack. Halibut and herring conditions are excellent.

Small fruit growers had a good season. The apple crop is estimated at about 90 per cent of last year's.

The coal mines are running normally, and the fall coal buying has started with a rush, retail dealers being unable to supply the demand. This, undoubtedly, is a reaction from the strike as there is no danger of a shortage in this district.

Wholesale business continues to improve. A slight gain over July this year was made and a pronounced increase over August, 1921.

Retail business is holding up reasonably well, but is not quite so good as for July.

The company's business showed a slight increase for the month, and indications are that business will continue to improve.

Real estate is quiet and below normal, but with a slight feeling of optimism. Building is good, the principal activity being in small homes and apartments. The Elks Club announces the building of a \$1,000,000 annex, construction of which will begin very soon.

Labor conditions in this district are excellent. There is no surplus of common labor and the demand for skilled labor has improved.

The long dry spell was broken after 75 days with a heavy rain covering the whole Northwest. The rain improved logging conditions, put out the fires and improved conditions generally, but was too late to aid the farmers materially.

Reports from the offices of the Stone & Webster Division of Construction and Engineering concerning the progress of the Wenatchee transmission line extension are to the effect that the end of August will see the completion of the right-of-way over the Wenatchee mountains, a stretch of 24 miles. The right-of-way over the Cascade Mountains is also cleared and about 60 per cent of the location has been completed. There are 400 men at work, a majority of whom are engaged on clearing. Ahead of the work are five parties of engineers. Foundations for towers are being put in and the first pole was set August 17. Poles have been distributed over the Cascade range and the first car load of wire has been received at Ellensburg and is now being distributed. The roads are now in good condition and there has been just enough rain to keep the dust down. Thus far all conditions have favored the work and satisfactory progress has been made, according to Mr. SHUFFLETON and Mr. SHANNON.

Mr. JOHN HARISBERGER, superintendent of light and power, and Messrs. NYE and RAIDER, of the engineering department, represented the Seattle division of the Puget Sound Power & Light Company at the convention of the American Institute of Electrical Engineers, at Vancouver, B. C., August 8-12, and report a successful meeting.

Mr. D. C. BARNES, manager, visited Boise, Ia., August 8-12.

Word has been received in Seattle that Mr. A. L. KEMPSTER, formerly manager of the Seattle division, Puget Sound Power & Light Company, has been appointed general manager of the New Orleans Railway & Light Company by the newly reorganized company which has succeeded the Federal receivership.

SYDNEY, N. S., AUGUST 23

Since the last conditions letter was written in July, there has been a most disastrous check to the improvement in general business conditions which was hoped for at that time. Subsequent to the mass meeting of miners which was held in



Glance Bay, July 23, at which time a resolution was passed demanding that the district executive board of the United Mine Workers take steps to enforce 1921 rates of pay retroactive to January 1, 1922, or call a strike on August 15, all local executives comprising district No. 26, with one exception, supported the resolution and thus authorized a strike. On August 13, a conference was held between the officials of the British Empire Steel Corporation and members of the U. M. W. district executive. After an all day conference, a mutually satisfactory agreement was reached whereby the men paid datal wage were to accept an increase of 40 cents per day, retroactive to July 1, 1922, making their daily wage \$3.25, and contract men were to take a 10 per cent increase over the rate of pay then in effect. It was generally felt by most people other than the miners that this compromise was very favorable to the men, but the next day, August 14, a mass meeting of miners was held in Glance Bay, and they repudiated the arrangement which had just been made by their representatives and went out on strike at midnight, calling out at the same time all firemen, power station operators, pumpmen and others doing what is generally known as maintenance or protective work.

In spite of hard times and reductions in wages, earnings of the light and power department of this Company have remained about the same as last year or increased.

Due to the necessity of conserving our supply of coal and also due to the fact that traffic is very light, ferry operation of this company has been curtailed.

The closing of Dominion Coal Company stores at Glance Bay and suspension of all freight operations on the Sydney & Louisburg Railway have contributed to an increase in our electric express shipments on the Sydney & Glance Bay Interurban.

There are some 10,000 miners out of work in Cape Breton and probably 2,000 steel workers are also likely to be unemployed if the strike lasts even a short time.

#### SEPTEMBER 1

[At the conference between Dominion Coal Company officials and U. M. W. district 26 executive, held August 25, a scale of wages, practically the same as agreed upon just before the strike was tentatively adopted with the proviso that the contract would extend until January 15, 1924. Maintenance men have been working the past week and there has not been much damage to the mines. Dr. Clarence McKinnon of Halifax, who has the confidence of both sides, was asked by the U. M. W. executive to be present at the conference in an informal capacity and his influence was noticeable both at the conference and at the miners' meeting which ratified the proposed agreement on August 31.]

MR. W. H. RODDEN, assistant chief clerk, has been transferred to the position of chief clerk with the Lowell Electric Light Corporation.

MR. G. W. WEATHERBEE, collections clerk, left on July 29, for Charlottetown, P. E. I., having received word of the death of his father.

MR. W. G. RICHARDSON, payroll clerk, recently returned from a vacation spent at Marble Mountain.

MISS MARIE ALEXANDER, ledger clerk, is at present spending her vacation at Gardner, Me.

MISS ELMA ISRAEL, accounting department clerk, has returned from Moncton, New Brunswick.

MISS ANABEL MORRISON, stenographer, has just returned from a motor trip through Cape Breton Island. On the trip she visited many places of historical interest, including Dr. Alexander Graham Bell's residence at Bienn Bhreagh.

MR. G. G. SPENCER, assistant treasurer, and MR. R. B. WOODILL, manager's clerk, recently had a week's salmon fishing on the Margaree River. MR. SPENCER succeeded in landing five salmon.

**TACOMA, WASH., AUGUST 22**

Tacoma business men, especially those in retail lines, report the months of June and July as being the best in the past six years. Buying has been steady and the call for variety is growing. An excellent fall business is predicted.

Due to some 60 odd days of dry weather, ice cream and candy factories have done a record breaking business. Moving picture theatres have suffered, especially during the day.

The general outlook for business is very promising, provided the transportation strike is brought to a close within the next few weeks.

Credit conditions are reported by the banks to be improved over last year.

Wholesalers are finding collections easier and business prospects good.

The lumber situation is good and demand is keeping up.

The weekly pass for one dollar in Tacoma has met with much success. This was installed on the city lines of the Tacoma Railway and Power Company and Pacific Traction Company, on July 24, and the number of sales made each week shows an increase over the week previous. Jitney competition at present is quite keen.

There are 2,900 men out on strike in Tacoma at the present time. Labor conditions in other lines are very satisfactory.

Tourist travel to Mount Rainier National Park continues heavy, and it has already exceeded last year's travel over 100 per cent.

MR. and MRS. W. E. WILMOT recently motored to British Columbia points, spending several days in Vancouver and Victoria.

COLONEL H. G. WINSOR attended a meeting in Portland early in August in connection with the Pacific Coast Claim Agents Association.

MR. C. V. ALLEN, land and tax agent, has returned from a motor trip through California with his family.

MR. G. A. DEHASETH, formerly manager of the Ponce Electric Company, has returned to Tacoma to reside and has accepted a position as superintendent of the Thompson & Smith Transportation Company, Inc., operating a fleet of motor busses between Tacoma and Olympia.

MR. E. C. CLAWSON has recently entered the accounting department, having been transferred from the Boston office.

MESSRS. DONEGAN and BENNETT, auditors, from MR. BROWNELL's office, will be in Tacoma for a few weeks in connection with audit of the books.

MR. RICHARD T. SULLIVAN, manager, will attend the meeting of Stone & Webster managers in Boston during October.

COLONEL and MRS. H. G. WINSOR are receiving congratulations over the arrival of a grandson at the home of their son, Ralph, in Tacoma.

Considerable repair work is being done on the city lines in the downtown business section, MR. HENRY LEAVER, roadmaster, having charge of this work.

§ Arrangements have been made to secure ten or twelve Birney cars for the Tacoma property as soon as these cars have been released from the Everett property on account of the new combination street car and bus system to be established there.  
£ Mr. W. L. ROBBINS, engineer, with his family, have rented a cottage at Fosdick Beach on the Sound for the month of August.

TAMPA, FLA., AUGUST 21

With the exception of the cigar industry, in which the output of every grade largely exceeded that of July, 1921, there is considerable dullness in local industries.

Phosphate shipments show a decrease of 28,000 tons as compared with July, 1921, and a decrease of 21,600 tons as compared with June of this year.

The Florida Citrus Exchange states that Florida fruit during the coming year will have the greatest opportunity in the history of the state. They base their statement on the condition of the California crop.

The Sixth Federal Reserve District at Atlanta reports that business is improving in Florida, although not yet normal.

Jobbers still complain of dull business and this statement is duplicated, with more emphasis, by retailers.

There is a plentiful supply of common labor.

Four new Birney double truck cars arrived the middle of August and have been put into service on the Ballast Point-Port Tampa line. These cars have created very favorable comments from both patrons and employees of the company. An editorial in one of the local papers read as follows:

"The big Port Tampa one man cars of the Tampa Electric Company are as smooth riding as a Pullman."

These cars are operated on the plan of pay-as-you-enter from Tampa to Ballast Point and Port Tampa to Ballast Point, and pay-as-you-leave from Ballast Point to Port Tampa and Ballast Point to Tampa.

Good progress is being made on the installation of the new 600 horsepower Babcock and Wilcox boiler at the West Jackson Street power station, and on the underground distribution system—both jobs being under the supervision of Stone & Webster, Inc., Division of Construction and Engineering, Mr. F. S. DANA, engineer, in charge.

The city of West Tampa has authorized the Tampa Electric Company to proceed with the installation of incandescent street lights to replace gas lamps, the city's contract with the Tampa Gas Company having been cancelled at that company's request.

Mrs. Mary Frances Lamb, mother of MESSRS. NORMAN B. and DANIEL L. LAMB, of the Tampa Electric Company, and of Mr. JAMES CONNOR LAMB, commercial agent of the Baton Rouge Electric Company, died in Tampa, August 3.

Mr. JAMES H. CARRIN, one of the youngest employees at the Hydraulic Plant, died suddenly of cerebral hemorrhage on July 27.

Eleven employees of the company, members of local Batteries A, B and C Field Artillery, went into training at Camp Bragg, near Fayetteville, North Carolina, from July 23 to August 8. These men are SERGT. L. W. CROMPTON, JR., CORP. D. B. WILSON, PRIV. PAUL GURNEY, PRIV. M. O. CARROLL, PRIV. LEIGHTON WILSON, PRIV. H. C. GIBBONS, JR., PRIV. WALTER AKINS, PRIV. J. R. PARRISH, PRIV. MANUEL RAMIREZ, PRIV. WARREN EZZELL and PRIV. E. RIVAS.

One of Tampa's old landmarks was demolished during August, the two story brick building at the corner of Twiggs and Franklin Streets, which for 27 years was the home of the Exchange National Bank on the first floor, and the law offices of Colonel Peter O. Knight on the second floor. The bank and Colonel Knight have moved into temporary quarters, while Stone & Webster, Inc., Division of Construction and Engineering erect a modern banking structure, with offices on the second floor for Mr. Knight.

MR. T. J. HANLON, JR., manager, made a business trip to Jacksonville during August.

WOONSOCKET, R. I., AUGUST 24

Conditions in the local cotton industry are still dull. The majority of the woolen and worsted industries are running on normal schedule and are optimistic as to the future. The Woonsocket Machine and Press Co. are at present running on three days a week and we have been advised by a representative of the company that this situation will continue for some time.

The local lumber companies report business good, due to the considerable amount of building in progress.

Local retail merchants report business fairly satisfactory.

The majority of our present customers are not using power up to normal amounts, due to depressed business conditions, but we expect that this situation will show some improvement.

Negotiations with the Stillwater Worsted Co. have resulted in an increase of 25 kilowatts in their day load, the increase in their night load being held in abeyance until business conditions improve.

The building boom which has been in evidence in this vicinity for some time has been reflected directly in a substantial increase in gas and electric meters, the first six months of this year showing an increase of 50 per cent over the same period last year.

Work is still in progress on repairs to the Buckland and Clark Building on Main Street which was damaged by fire some months ago. The French Worsted Co. recently announced that they are to build an additional story to one of their mills and will use our power for night operation in this addition.

E. V. WALSH, meter foreman, has returned from his annual vacation.

MISS GERTRUDE SANDERSON has re-entered the employ of the company filling her former position as clerk in the station engineer's office.

W. L. CHENEY, superintendent of distribution, has returned from his vacation at Lake Sunapee, N. H.

Woonsocket is experiencing a big boom in building operations, which is reported as probably being the record for the city.

J. G. FITZGERALD, assistant superintendent of distribution, is on his annual vacation.

On July 27, the baseball team of the Woonsocket division journeyed to Slater Park, Pawtucket, where they met their opponents, the baseball team of the Pawtucket division. The former emerged from the game victorious, with a score of 14 to 8. On August 17 the Pawtucket division visited Woonsocket and administered a similar defeat to our boys, the final score being 11 to 5. A rubber game is planned for the near future in which both teams are anticipating a close contest.

C. L. O'LOUGHLIN, superintendent of the gas department, and family have returned from a vacation spent in the White Mountains.

F. K. SIMMONS, industrial service engineer, accompanied by Mrs. Simmons, is spending his vacation at Ogunquit, Maine.

## Library Notes

**T**HE "Extension Service," which has committee meetings at the Boston Public Library on Tuesdays at 3.00, is now establishing sponsorships for various purposes at the rate of one for each meeting, beginning August 1. Thus, the program through September 5, reads, for topics and sponsors, as follows:

Aug. 1	Everyday English.....	Dr. Francis K. Ball
8	Union Catalogue.....	Mr. F. H. Chase or B. P. L.
15	Dates of Coming Events.....	The Committee
22	Engineering Book Lists.....	Mr. J. A. Moyer
29	Co-ordination of Study and Business.....	Mr. G. W. Lee
Sept. 5	Settlements and Social Service.....	Mr. Albert Kennedy

On the docket, without being fixtures in every case, are the following: Fuel Economy, Building Maintenance (Mr. G. L. Smith), Public Documents (Miss Guerrier), Vocations and Avocations for Elderly People (Mrs. Muller), Community Centers (Mrs. Eva W. White), Disposal of Superfluous Literature, Language Headquarters, Civics, Telephone Service, Books for the Business Library, Maps and Atlases, Engineering Handbooks, Educational Resources, Availability of Lantern Slides and a luncheon at the Twentieth Century Club to line up the transactions of the previous months and prepare for the business of 1923.

The "Extension Service" committee consists of the following:

James A. Moyer, chairman, Department of Education, State House; George Winthrop Lee, vice-chairman, librarian, Stone & Webster, Inc.; Frank H. Chase, treasurer, reference librarian, Boston Public Library; Miss Laura R. Gibbs, secretary, Tel-U-Where Co. of America, 142 Berkeley Street; Miss J. T. Edwards, assistant secretary-treasurer, 4 West Cedar Street; Charles F. D. Belden, librarian, Boston Public Library; Mrs. Allen Chamberlain, 33 Pinckney Street; Mrs. Bertha V. Hartzell, Social Service Library, 18 Somerset Street; Frank L. Locke, B. Y. M. C. U., 48 Boylston Street; Mrs. Wm. A. Muller (Miss Marion Churchill), Arlington, Mass.; Mrs. George T. Rice, Westwood, Mass.; Mrs. Eva W. White, director of Community Service of Boston, Inc., 439 Boylston Street, and of Elizabeth Peabody House, 357 Charles Street.

# Library of Stone & Webster, Inc.

## Recent Accessions

### (10) CIVIL ENGINEERING

- 351 Charter, by-laws, list of members and professional engineering acts. Engineering Institute of Canada, 1922. 362p, 6x9. \*6939.En334.093
- 352 Destruction by marine borers: is the Port of New York in danger? Discussion by R. T. Betts and others. . . . Municipal Engineers Journal, Vol. 8, 1922—second quarterly issue, pp. 57-80, illus. V\*0775.M921
- 353 The Colorado River and Arizona's interest in its development. G. E. P. Smith. [In] The University of Arizona, Agricultural Experiment Station, Bulletin No. 95. Feb. 25, 1922. Tucson, 1922. (17p), 6x9, map. V\*0732.Sm57

### (20) ELECTRICAL, (30) MECHANICAL ENGINEERING

- 354 Formulae and tables for the calculation of alternating current problems. L. Cohen. New York, 1913 (1st ed.) 282p, 6x9. \*071.C66
- 355 Dielectric phenomena in high voltage engineering. F. W. Peek, Jr. New York, 1920 (2d ed.) 282p, 6x9. \*0714.P344
- 356 The magnetic circuit. V. Karapetoff. 1st ed. New York, 1911. 285p, 6x9. \*071.K143m
- 357 The electric circuit. V. Karepetoff. 2d ed. New York, 1912. 229p, 6x9. \*071.K143
- 358 Standard handbook for electrical engineers—prepared by a staff of specialists . . . 5th ed. McGraw-Hill Book Co., Inc. New York, 1922. 2137p, 4x7. \*071.M17.1922
- 359 Proceedings of the fifteenth annual convention of the Northwest Electric Light and Power Association, held at Boise, Idaho, June 7-10, 1922. 214p, 6x9. \*6924.1922
- 360 Heat balance in steam power plants. [Reprinted from papers and discussion presented before the 42d annual meeting of the American Society of Mechanical Engineers.] New York, 1922. 78p, 6x9. \*6950.072h

### (50) RAILWAYS

- 361 Proceedings of the thirty-third annual convention. . . . Atlanta, Ga., Oct. 11-14, 1921. National Association of Railway and Utilities Commissioners. New York, 1922. 373p, 6x9. \*6938.1921
- 362 Railroads and business prosperity. Proceedings of the Academy of Political Science in the city of New York. Edited by T. W. Van Metre and P. T. Moon. New York, 1922. 130p, 5½x8½. \*022.V26
- 363 The railroad situation with special reference to plans or consolidation of New England roads. . . . Associated Industries of Massachusetts. Boston, 1922. 45p, 6x8. \*022.As872
- 364 The railway situation. S. O. Dunn. (An address delivered at the 34th annual meeting of the Railway Accounting Officers Association, Cleveland, Ohio, June 7, 1922.) Wash., 1922. 14p, 6x9. \*6936.022d
- 365 Thirty-sixth, thirty-seventh and thirty-eighth reports of the Railway Accounting Officers Association, Atlantic City meeting. Wash., 1920-1922. vp, 6x9. \*6936.1920-1922

- 366 Railway accounting officers meet at Cleveland . . . reporting the thirty-fourth annual meeting of the Railway Accounting Officers Association. 16p, 9x12. \*6936.0253e

## (70) SOCIOLOGY

- 367 Social settlements: a selected bibliography. Russell Sage Foundation Library, Bulletin of New York, 1922. vp, 6x9. \*096.S0133e  
 368 Eye conservation in industry: conducted under the auspices of the Federated American Engineering Societies. New York [c1922]. 29p, 6x9. \*6978.029  
 369 School for business librarians under the auspices of the Washington School for Secretaries. Circular of information, 1922-23. Wash., 1922. vp, 5½x8. \*085.W276  
 370 A proposed reorganization of engineering instruction in the freshman and sophomore year. L. E. Akeley. [Reprinted from the Bulletin of the Society for the promotion of Engineering Education.] South Dakota, 1922. vp. 6x9. \*087.Ak32

## (74) FINANCIAL

- 371 The federal farm loan system. . . University of Illinois Agricultural College and Experiment Station. Urbana, 1922. 20p, 6x9. \*025.116  
 372 Notes on going value. Copies Nos. 3 and 4. March, 1915. W. H. Blood, Jr. vp, 8x11. \*025.B623g  
 373 Valuation reports of the Interstate Commerce Commission. Texas Midland Railroad Valuation Docket No. 2. Kansas City Southern Railway et al Valuation Docket No. 4. Submitted Nov. 8, 1918. Decided July 1, 1919. vp, 6x9. \*6803.025tm and \*6803.025kc  
 374 Ratio and percentage tables as applied to analyses of financial statements of public utility companies. . . Boston [c1921]. 19p, 6x9. \*025.H383  
 375 Poor's and Moody's Manual—consolidated Industrial Section. Vol. 1, A-J. Poor's Publishing Co. New York, 1922. 1952p, 6x9. \*02.M77in.Vol.1,A-J  
 376 The fight of the New York Herald against the \$5,000,000,000 bonus raid. directed personally by F. A. Munsey. Militant American Journalism. Editorials reprinted from New York Herald. 36p, 6x9. \*0292.N4897  
 377 Poor's and Moody's Manual—consolidated Industrial Section. Vol. 2, K-Z. Poor's Publishing Co. New York, 1922. 2016p, 6x9. \*02.M77in.Vol.2,K-Z  
 378 The magazine of Wall Street. Edited by R. Wyckoff. New York, nd. vp, 8x11  
 379 Investment News—Part 2. Mid-year review. A weekly financial journal devoted to investments, commerce and business. Chicago, nd. 177p, 9x12. \*025.In89su.1922  
 380 Railway accounting procedure, 1922 ed. Edited by E. R. Woodson. Wash., 1922. 455p, 6x9. \*6936.025.1922

## (75) ANNUAL REPORTS

- 381 Thirteenth annual report for the year ended Dec. 31, 1919. New York Public Service Commission, 1st District. Vol. 1. Albany, 1920. 358p, 5½x8½. \*1704.1919  
 382 Annual report on the statistics of manufacturers for the year 1919. Boston, 1921. 131p, 6x9. \*1402.M31.1919

## (76) LEGAL

- 383 Index-digest of decisions of United States Railroad Labor Board. Compiled by the Bureau of Information of the Southeastern Railways. Wash., 1922. 325p, 6x9. \*6936.03id
- 384 Miscellaneous sheets published by Railway Accounting Officers Association . . . regarding some rulings by the Comptroller-General of the United States. Wash., 1922. vp, \*6936.03r
- 385 Public Utilities Reports: containing decisions of the public service commissions and of state and federal courts. 1922 B. New York, nd. 6x9½. \*035.L449.1922B
- 386 Digest of public utilities reports annotated for the year 1921, including volumes 1921A-1921E. New York [c1922]. 487p, 6x9½. \*035.L449d.1921

## (77) PUBLIC UTILITIES

- 387 A permanent basis for rate regulation. Yale Law Journal. Jan., 1922. vp, 8x11. \*036.R37

## (90) SOURCES OF INFORMATION

- 388 Official Automobile Blue Book. Vol. 1, 1922. Automobile Blue Book, Inc. New York, 1922. 1302p, 5x9½, maps. \*063.Au821
- 389 The Statesman's Yearbook: statistical and historical annual of the states of the world for the year 1922. Edited by Sir John S. Keltie. . . London, 1922. 1568p, 4½x7. \*09.St1922
- 390 The University of Illinois alumni directory, 1849-1919. Wisconsin, 1922. 662p, 6x9. \*093.W752.1849-1919
- 391 Brown's directory of American gas companies and gas engineering and appliance catalogue. . . . 1922 edition . . . compiled, edited and published annually by Robbins Publishing Co., Inc. 966p, 9x12. \*093.B81.1922
- 392 Annual catalogue of the Worcester Polytechnic Institute, 1921-22. 168p, 6x8½. \*093.W890.1921-22
- 393 Cumulative book index . . . author, title and subject catalog in one alphabet of books published—July, 1921-June, 1922. Edited by E. E. Hawkins. The H. W. Wilson Co. New York [c1922]. 806p, 7x10½. \*096.W693us. 1921-1922
- 394 Catalogue of the officers and graduates of Yale University, 1701-1915, New Haven, 1916. 685p, 6x9½. \*093.Y120g.1701-1915
- 395 Official register of the United States, 1921. Compiled by the Department of Commerce, Bureau of Census. Wash., 1921. 1328p, 9x12. \*6891.093.1921

## MISCELLANEOUS

- 396 Peking: a historical and intimate description of its chief places of interest. Juliet Bredon—with maps, plans and illustrations. Kelly & Walsh, Ltd. Shanghai . . . 1922. 522p, 6½x9. \*8270.B744
- 397 Statutes of the Universal Esperanto Association. Geneva, 1922. 20p, 5x7. \*147.03
- 398 The Japan Advertiser. B. W. Fleisher, ed. Tokyo, 1922. vp, 18x24. \*8280.065. 7/9/22



## Coupons and Dividends Due

	Per Cent.
Sept. 1, *Blackstone Valley Gas and Electric Company, Common Stock (\$50 par).....	2½
Sept. 1, *Central Mississippi Valley Electric Properties, Preferred Stock, 6 per cent.....	1½
Sept. 1, *Connecticut Power Company, The, Preferred Stock, 6 per cent	1½
Sept. 1, *Connecticut Power Company, The, Common Stock.....	2
Sept. 1, Jacksonville Traction Company, 5s, 1931.....	2½
Sept. 1, *Key West Electric Company, The, Preferred Stock, 6 per cent...	1½
Sept. 1, Northern Texas Electric Company, Preferred Stock, 6 per cent..	3
Sept. 1, *Northern Texas Electric Company, Common Stock.....	2
Sept. 1, Pacific Coast Power Company, 5s, 1940.....	2½
Sept. 1, Puget Sound Power & Light Company, 8s (Coupon Notes), 1925	4
Sept. 1, Puget Sound Power & Light Company, 8s (Coupon Notes), 1926	4
Sept. 1, Seattle Electric Company, The, Seattle-Everett, 5s, 1939.....	2½
Sept. 15, *El Paso Electric Company, Common Stock.....	2½
Sept. 15, Galveston-Houston Electric Company, Preferred Stock, 6 per cent	3
Oct. 1, Beaumont Traction Company, 5s, 1943.....	2½
Oct. 1, Columbus Power Company, The, 5s, 1936.....	2½
Oct. 1, *Columbus Electric and Power Co., 1st Preferred Stock.....	1¾
Oct. 1, *Columbus Electric and Power Co., 2nd Preferred Stock.....	1¾
Oct. 1, Connecticut Power Company, The, 5s, 1963.....	2½
Oct. 1, *Eastern Texas Electric Company, Common Stock.....	2
Oct. 1, Everett Railway, Light and Water Company, 5s, 1925.....	2½
Oct. 1, Galveston-Houston Electric Railway Company, 5s, 1954.....	2½
Oct. 1, *Haverhill Gas Light Company, Capital Stock (\$50 par).....	2½
Oct. 1, Houghton County Electric Light Company (Coupon Notes), 7s, 1923.....	3½
Oct. 1, Mississippi River Power Company, Preferred Stock.....	1½
Oct. 1, Nevada Power, Light and Water Company, 6s, 1932.....	3
Oct. 1, New London Gas and Electric Company, The, 5s, 1927.....	2½
Oct. 1, New London Gas and Electric Company, The, 5s, 1929.....	2½
Oct. 1, *Ponce Electric Company, Preferred Stock.....	1¾
Oct. 1, Savannah Electric and Power Co., 7½s, 1941.....	3¾
Oct. 1, *Savannah Electric and Power Co., Debenture Stock.....	2
Oct. 1, Savannah Electric and Power Co., Preferred Stock.....	3
Oct. 1, *Savannah, Thunderbolt and Isle of Hope Railway, The, 4s, 1947	1
Oct. 1, Tacoma Railway and Power Company, 5s, 1929.....	2½
Oct. 1, Woonsocket Electric Machine and Power Company, 4½s, 1943..	2½
Oct. 15, *Puget Sound Power and Light Company, Preferred Stock.....	1½
Oct. 15, *Puget Sound Power and Light Company, Common Stock.....	1
Oct. 15, *Puget Sound Power and Light Company, Prior Preferred Stock..	1¾

\*Payable quarterly.

Dividend rates based on the last declaration.

# Quotations on Securities of Companies under Stone & Webster Management

*September 12, 1922.*

The Securities Department executes orders on commission for those wishing to purchase or sell.  
Requests for information in regard to the companies will be answered promptly.

COMPANY	BONDS		PREF. STOCK		COMMON STOCK	
	Int. Rate	Price and Int.	Div. Rate	Price	Div. Rate	Price
Ab. & Rock., The El. Lt. & Pr. Co. of { Notes, July, 1923	7%	100½	No	Pref	8%	125
Baton Rouge Elec. Co. { Bonds, 1939 Notes, Jan., 1923	5% 7%	92 115	6%	86	10%	115
Blackstone Valley Gas & Elec. Co. (Common Stock par value \$50)	5%	100	*6%	92	10%	72½
Cape Breton Elec. Co., Ltd.	5%	83	6%	65		12
Central Mississippi Valley Electric Properties	No	Bonds		75		12
Chicago, Wilmington & Franklin Coal Co. (Common Stock par value \$10)			*6%	90	10%	25
Columbus Elec. & Power Co.	6%	104	*7% 1st *7% 2d	99 88		80
Columbus Power Co., The	5%	98		.....		.....
Connecticut Power Co., The	5%	94	*6%	92	8%	150
Connecticut Valley Lumber Co. { Serial Bonds June, '24-'34	6%	100 96½				
Eastern Texas Elec. Co. { Bonds, 1942 Notes, May, 1925	5% 7%	94 101¼	*6%	83	8%	94
Edison Elec. Illg. Co. of Brockton { Bonds, 1930	5%	100	No	Pref	10%	183
El Paso Elec. Co. { Bonds, 1932 Notes, 1925	5% 7%	95 102	6%	88	10%	†125
Fall River Gas Works Co.	No	Bonds	No	Pref	12%	205
Galveston Elec. Co.	5%	88		.....		.....
Galveston-Houston Elec. Co. { Notes, Aug., 1925 Notes, Feb., 1926	7% 8%	101¼ 100	*6%	†75 B L		37½ B L
Galveston-Houston Elec. Ry. Co.	5%	88	No	Pref		.....
Haverhill Gas Light Co. (Stock par value \$50)	No	Bonds	No	Pref	9%	85
Houghton County Elec. Lt. Co. { Bonds, 1927 Notes, 1923 (Stock par value \$25)	5% 7%	92 100	6%	20		12

COMPANY	BONDS		PREF. STOCK		COMMON STOCK	
	Int. Rate	Price and Int.	Div. Rate	Price	Div. Rate	Price
Houston Elec. Co.	5%	98½ <sup>B</sup>		.....		.....
Jacksonville Elec. Co.	5%	90½				
Jacksonville Tract. Co.	5%	84½		37		6
Keokuk Electric Co. { Notes, January, 1923	6%	100	*6%	80		.....
Key West Elec. Co., The	5%	80		.....		.....
Lowell Elec. Lt. Corp., The	No	Bonds	No	Pref	10%	183
Mississippi River Power Co. { Bonds, 1951 Debtentures, 1935	5% 7%	95½ <sup>B</sup> 103	*6%	85 <sup>A</sup> <sup>B</sup>		33 <sup>A</sup> <sup>B</sup>
Northern Texas Elec. Co.	5%	89	6%	84 <sup>B</sup> <sup>L</sup>	8%	86 <sup>B</sup> <sup>L</sup>
Northern Texas Traction Co.	5%	95	No	Pref		.....
Pacific Coast Power Co.	5%	94	No	Pref	No	Com
Pensacola Elec. Co.	5%	81		28		6
Public Service Investment Co.	No	Bonds	*6%	85		103
Puget Sound Elec. Ry.	5%	88 <sup>B</sup>		.....		.....
Puget Sound Power Co.	5%	97	No	Pref	No	Com
Puget Sound Power & Light Co. { Notes, 1925 Bonds, 1941	8% 7½%	100 106	Prior *7% *6%	105 84	4%	56½
Railway & Light Sec. Co. { First Series, 1935 Second Series, 1939 Third Series, 1939 Fourth Series, 1942 Fifth Series, 1944 Sixth Series, 1946	5% 5% 5% 5% 5% 5%	95½ 94½ 94½ 94 94 93	*6%	88	6%	80
Savannah Elec. Co.	5%	87 <sup>B</sup> <sup>L</sup>				
Savannah Elec. & Power Co.	7½%	106	*8% *6%	100 70		19
Seattle Elec. Co., The { 1st Mortgage, 1930 Cons. & Ref., 1929 Seattle-Everett, 1939	5% 5% 5%	99½ <sup>B</sup> 97 92½	No	Pref	No	Com
Sierra Pacific Elec. Co.			*6%	77		8½
Tacoma Ry. and Pr. Co.	5%	88	No	Pref		.....
Tampa Elec. Co.	5%	95	No	Pref	10%	137
Whatcom County Ry. & Lt. Co.	5%	92	No	Pref	No	Com

Quotations are approximate. All stocks \$100 par value unless otherwise specified.

\*Cumulative. †Ex-Dividend. A. Listed on London Stock Exchange. B. Listed on Boston Stock Exchange. L. Listed on Louisville, Ky. Stock Exchange. N. Common shares have no par value. X. Ex-rights.

The Securities Department wishes to bring to the attention of members of the organization the following securities which it recommends for investment :—

<i>Bonds</i>	Rate	Interest and Dividend Dates	Price and Yielding Interest	About
COLUMBUS POWER CO. First Mortgage, due 1936	5	Apr. and Oct.	98	5.20%
*MISS. RIVER POWER CO. First Mortgage, due 1951	5	Jan. and July	95 $\frac{3}{4}$	5.30%
†EASTERN TEXAS ELEC. CO. Gold Mortgage, due 1942	5	May and Nov.	94	5.50%
SEATTLE ELEC. CO. Cons. and Ref. due 1929	5	Feb. and Aug.	97	5.50%
*UNITED LIGHT & RYS. CO. First Lien and Cons. due 1952	6	Apr. and Oct.	98	6.15%
*PUGET SOUND POWER & LIGHT CO. Gen'l and Ref., due 1941	7 $\frac{1}{2}$	May and Nov.	106	6.90%
<i>Notes</i>				
†GALVESTON-HOUSTON ELEC. CO. Gold Notes Series A, due Aug. 1, 1925	7	Feb. and Aug.	101 $\frac{3}{4}$	6.50%
REPUBLIC OF BOLIVIA Sanitation Loan, due June, 1923	6	June and Dec.	98 $\frac{3}{4}$	7.50%
<i>Investment Stocks</i>				
†BLACKSTONE VALLEY GAS & ELEC. CO. Common	10	Mar. 1 qrtly.	72 $\frac{3}{4}$	6.90%
PUBLIC SERVICE INVESTMENT CO. Cumulative Preferred	6	Feb. 1 qrtly.	85	7.05%
MISS. RIVER POWER CO. Cumulative Preferred	6	Jan. 1 qrtly.	Market (85)	7.05%
NORTHERN TEXAS ELEC. CO. Preferred	6	Mar. 1 and Sept. 1	84	7.15%
PUGET SOUND POWER & LIGHT CO. Cumulative Preferred	6	Jan. 1 qrtly.	84	7.15%
EASTERN TEXAS ELEC. CO. Cumulative Preferred	6	Jan. and July	83	7.25%
TAMPA ELEC. CO. Capital	10	Feb. 15 qrtly.	137	7.30%
SIERRA PACIFIC ELEC. CO. Cumulative Preferred	6	Feb. 1 qrtly.	77	7.80%
SAVANNAH ELEC. & POWER CO. Debenture	8	Jan. 1 qrtly.	100	8.00%
EL PASO ELEC. CO. Common	10	Mar. 1 qrtly.	125	8.00%

\*Denominations \$100, \$500, \$1000

†Denominations \$500, \$1000

‡Par \$50

Detailed information will be furnished upon request

## Securities Department Offices

147 Milk Street

Boston

New York

120 Broadway

Chicago

1st Nat'l Bank Bldg.



# STONE & WEBSTER

(Incorporated)

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# STONE & WEBSTER *Journal*

VOL. 31

OCTOBER, 1922

No. 4

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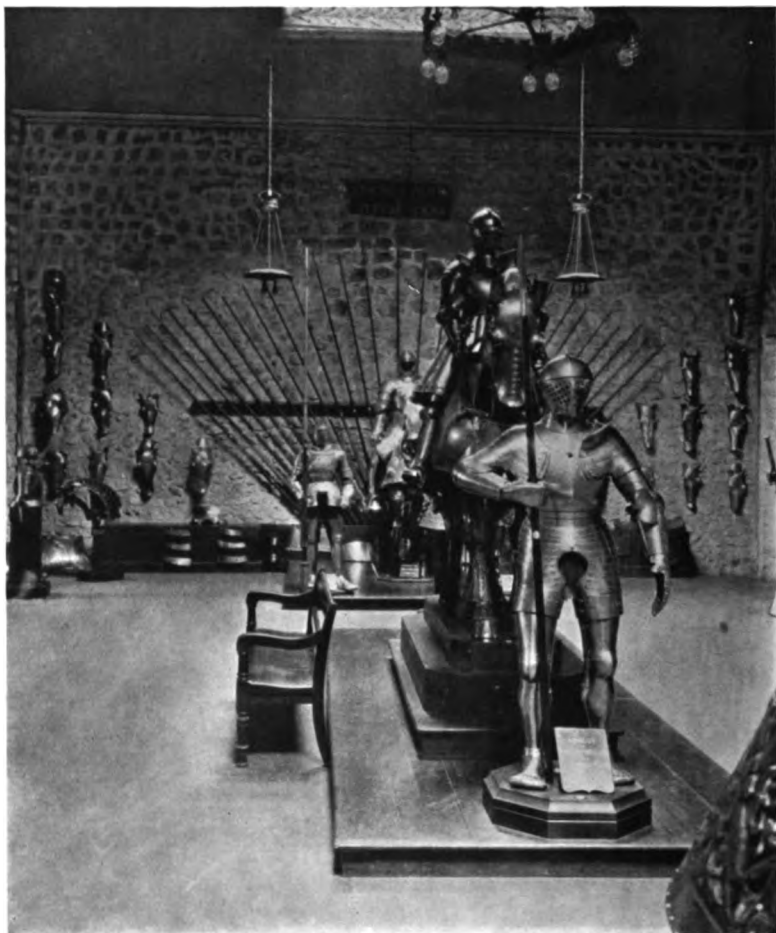
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**HENRY VIII'S ARMOR IN THE TOWER OF LONDON**

The piece in the foreground was worn in tournaments when fighting on foot, the center one is a priceless suit presented to the king by Emperor Maximilian of Austria, and the mounted figure in the rear wears the suit used for tilting, which weighs 98 pounds.

# STONE & WEBSTER JOURNAL

1922

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VOL. 31

OCTOBER

No. 4

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## EDITORIAL COMMENT

### Greetings

**G**REETINGS to Stone & Webster managers in convention assembled. The corporation welcomes you. The staff at headquarters in Boston expects to gain inspiration from your presence. And not least of all, the editor of the *STONE & WEBSTER JOURNAL* is unaffectedly glad of your coming; he regards each of you as an asset, on which he hopes from time to time to cash in.

In the rush and turmoil of our activities we often fail to take proper note of many of the finer aspects of life. There are few finer things than the solidarity of interest that characterizes such an organization as ours. While, as we have shown elsewhere, it would not be becoming in any of you to talk about your individual loyalty—it would be the last thing to occur to you to do—the editor of this *JOURNAL* feels that it is quite within his province to advert to it.

You constitute a remarkably harmonious organization; each of you has been selected for the position he occupies on the ground of fitness alone. It is that fact that gives so much meaning to your annual conferences and makes your coming a thing of such pleasant anticipation. You come both to learn and to teach. From your divergent experiences as related at these conferences the organization as a whole gains new insights into the problems that confront it, and is better prepared to meet the new and unexpected problems which the future is likely to bring.

Though most of you pass all but a few days of the year remote from us in the Boston office, we are working in the most sympathetic and eager co-operation with you, and you with us. You went out from us, and have returned to us for a brief interval. We shall talk business together, but we shall do much more than that—we shall give full play to our personal friendships.

The personal equation is strong in our organization. You are brain workers, with appointed tasks to perform in appointed ways. But you are first of all men, with wills and insights and imagination personal to yourself, by means of which the activities of the organization as a whole are successfully adjusted to the modifying factors peculiar to the many and widely different communities served by the organization.

As friends, united in exceptionally strong bonds of common interest, we shall spend this week. Though we meet as good friends, we shall part as better. And there can be no pleasanter experience than that.

## Loyalty

**T**HOMAS à Kempis says, "I had rather feel compunction than know the definition thereof." That is our view of loyalty. We had rather feel it than know how to define it.

Yet we have been asked to define it. It is not an easy task. Doubtless, many will say, "Nonsense." So many persons talk glibly about loyalty that you might suppose a definition of the word to be the easiest thing in the world. The definitions of glib talkers usually are.

Your loyalty is like your Godliness. The more you talk about it the less you have it. Canting definitions of loyalty are as common as canting definitions of piety. The righteous man is one who does not let his left hand know what his right hand is doing. A loyal man is one who does not confound his love of country with the public crib.

Loyalty is not the easy-going thing so many persons suppose. In fact, it is a very austere thing, a hard task master. The dictionary defines it as faithfulness to a superior, or to duty. But that does not let you know what the thing is in its essence. In fact, it may obscure the meaning.

Let us say that loyalty is faithfulness. Is faithfulness to a

vicious principal equally an act of loyalty with faithfulness to a good principle? If a man should sell his soul to the devil and be punctilious in the execution of his contract would he evince as much loyalty as a man who should serve God with the utmost diligence?

Is the loyalty that shouts for the old flag—and an appropriation—the same thing as the loyalty that never shouts and wants no appropriation, but that makes a man ready and willing to die for his country (and what is harder, to live for it)?

If you feel loyalty you don't talk about it. If you find yourself talking about it, you may doubt if you have it. Most of us are loyal to our wives, but we don't go about heralding the fact. Most of us are, we hope, loyal to our jobs, but we leave it to others to talk about our loyalty.

Yet we are asked to define loyalty. What is it? Is it, so to speak, merely a commercial product? Do we weigh it by the pound or measure it by the yard in exchange for things we buy? Sometimes it almost seems so.

We are members of a state or a nation, and in return for the protection it affords us we give it loyalty. We marry wives, and we pay them in loyalty for what they do for us. We take jobs from other people and accept their money; part of our return is in the form of loyalty. But is it wholly or chiefly a matter of *quid pro quo*? By no means—that is, if there is any real loyalty there.

Is faithfulness to others the foundation of loyalty? By no means. The faithfulness is an effect, not a cause. Loyalty, in its essential nature, is not the price we pay for what we get. It is something much finer than that.

Loyalty is not, primarily, what one owes others. It is what he owes himself. Loyalty is faithfulness to oneself—but at one's best. Consistency with one's base qualities is not loyalty. It is not until faithfulness rises above the purpose and sale point that it becomes loyalty.

To live up to the letter of a specific contract is a necessity imposed by custom, but it is not necessarily loyalty. To give another the best that is in you, and because you have to in order to preserve your self-respect—that is loyalty. One has first to be loyal to himself in order to be loyal to his neighbor.

For loyalty on the face means faithfulness to law. Law is eternal. It is the outward manifestation of the creative wis-

dom. To search it out and embody it in the greatest possible measure is the true function of man on this planet. As he finds it and embodies it, he must live by it. The farther he falls short of living by it, of being dominated by it, the farther he falls short of possessing the quality of loyalty.

There are a great many persons who would gladly cheat their neighbors if they felt they could keep out of jail. There is not much loyalty in them. There are many others who *could* cheat and keep out of jail, and who *would* cheat if they did not believe that honesty is the best policy—if they did not know that even a rogue cannot prosper permanently in business without adherence to a recognized code of business morals. There is not a great amount of loyalty in them.

There are a great many others who could not cheat if they tried; who in order to cheat their neighbors would first have to cheat themselves. It is among such that we look for loyalty. The rectitude of their conduct is but a symbol of a well ordered mind, which abhors the thought of doing anything involving the interests of others at less than the highest efficiency. In a word, true loyalty is found only among those whose instinct and determined purpose is to work harder for others than for themselves. Loyalty in its essence is sacrifice.

Bacon somewhere says that every man is indebted to his profession. Now the greatest of all professions is life itself. Life, in fact, should be a fine art, instead of the ramshackle, haphazard, inconsequential thing so many make it. If we lived aright every act, every word, every thought of every day would be full of dignity, honesty and generosity. Thus every life would not only be a joy to itself but also an inspiration and aid to others. Loyalty is the sign manual of those who are living, or trying to live, in this fashion.

It is the unpremeditated, spontaneous manifestation of minds imbued with a consciousness of the responsibility of life. One lives sensibly, justly, and generously primarily to realize himself. In realizing himself he attains to usefulness as a member of society. There are certain things that become a man (it used to be said that man was created in the image of God) and others that don't. If we strive to accomplish the becoming things, we need not worry about our influence.

"To thine own self be true,  
And it must follow, as the night the day,  
Thou cans't not then be false to any man."

## Brooding on Infinity

"I sat, until the first white star  
Appear'd, with dewy rays,  
And the fair moon began to bar  
With shadows all the ways.  
O, well is thee, whate'er thou art,  
And happy shalt thou be,  
If thou hast known, within thy heart,  
The peace that came to me.  
O, well is thee, if aught shall win  
Thy spirit to confess,  
God proffers all, 'twere grievous sin  
To live content in less."

**F**OR some reason these enchanting lines of Coventry Patmore come to our mind as we read Mr. Lemmon's article in this issue on "A Star Gazer." It is a marvelous story that he tells so artlessly, and yet with so much art.

Certainly, it is good to be reminded that the age of heroism is not past, and that peace has her victories no less renowned than war. At the age of seven a boy, having been allowed to look through a telescope, became enamored of the stars. When the boy had become a man of forty or more, having for twenty years been a workman in the pattern shop of a steel mill, he determined, on the encouragement of an indomitable and resourceful wife, to construct a telescope—and on savings of only a few hundred dollars. He was over fifty-one when the task was completed. Up to this time he was a workman. Then he became the world's greatest maker of instruments of precision. Honors were heaped upon him; among other things he was officially designated by his native state as its most distinguished citizen.

One reads what he passed through with suspended breath. His obstacles seemed insurmountable, his set-backs were from time to time excruciating, but, aided by a remarkable woman, he did that which would have daunted Hercules himself.

By nature the simplest and most inconspicuous of men, he was truly great. The Heavens declare the glory of God, and the firmament showeth his handiwork. The mind of John Brashear dwelt among the stars. He necessarily brooded upon infinity: hence his captivating simplicity. The peace that comes from intimacy with nature in her splendor and loveliness was his.

## Lions in the Lobby

**A**BOUT the most uncommon thing in the world is common sense. Uncommon persons have it, and common persons don't—for the mere possession of it makes one uncommon. It is a saving grace: "Rich in saving common sense," sings Tennyson.

There is a vast amount of uncommon sense afloat today. It is intent on revolutionizing the world.

"But Titus said, with his uncommon sense,  
When the Exclusion Bill was in suspense:  
Hear a lion in the lobby roar;  
Say, Mr. Speaker, shall we shut the door  
And keep him there, or shall we let him in  
To try if we can turn him out again?"

That was written two centuries ago. We feel sure that the uncommon sense of today would say, "Let him in!" In fact, we have let in a number of roaring lions lately; some day we shall try to turn them out. Item, a stupendous tax rate! That is only one. Lions are as thick about us today as they used to be about the campfires in the South African veldt. Common sense says, "Keep them out!" Uncommon sense says, "Let's debate the question of admitting them!"

Common sense is apparently like the gift of poetry—the poet is born, not made. Still, there is an art of poetry, and many persons study it carefully and try to exercise it. And there are a few fundamental things about common sense that all can master if they try hard.

The first thing common sense teaches is that one gets by giving. Giving is work. The only things a human being knows by intuition are that he is, that there are things external to him, and that today is not yesterday or tomorrow.

But a human being cannot live very long on this earth by merely intuiting these three things. He has got to feed and clothe and shelter himself by using the things that are external to him, and he has not only got to do it today, but also tomorrow, as he had to do it yesterday. That means work. His death knell will ring in a very few hours if he does not work, or if someone does not work for him. But of that later.

He is obliged to put out his hand and grasp the things that lie outside of himself and convey them to his mouth and back, and usually he has to manipulate them before he so conveys them. "If a man will not work he shall not eat."

All this seems very elementary. Yet a good part of the world is acting today as if there was not a word of truth in it. A great many persons have acquired the idea that the Almighty will feed them with manna from heaven, as he fed the Israelites, or that they will be fed by the ravens as Elijah was. Alas! those days have gone by. A great many others, however, seem to think that they can avoid work by making others work for them. This brings us to another thing common sense teaches.

Self-reliance is as essential as work. In the long run every tub has to stand on its own bottom. No one is going to work very long for another unless the other works for him. If the other does not work he will have no means of making payment. The quitter has got to have some self-reliance, otherwise he cannot quit. If a few persons should think that they could make all the rest their slaves, and by so doing get rid of working themselves, they would soon find they had obtained the worse end of the bargain. We have heard more than one Southerner say that in the old plantation days he worked a good deal harder than his slaves. Keeping track of slaves and making them supply your needs is, and always has been, a difficult task. Your muscles may not work so hard, but your brain wears out a good deal quicker.

It is impossible to dodge work in that way. The trouble is, we associate work with a weekly wage. If a man does not go to the mill on Monday morning his pay stops, and he says he is not working. But he makes the mistake of his life. The chief thing about most persons is their stomach. Though a man may cease working in the mill he cannot stop his stomach working. Our knowledge of physiology is somewhat limited, but we suspect that the stomach works harder without food than it does with it.

One has to work whether he wants to or not. If he does not work one way he will another. The mere act of breathing is work, and if you go too long without eating breathing becomes a more difficult proposition. No work usually means more work. The only way to prevent this is by making someone do most of your work for you. Personally we do not believe you can do this without slaves who cost you less effort than you would expend in satisfying your needs yourself, and this we believe can be done only in rare instances.

There is one other way, and it is the only way that seems to have any chance of success. One may live comfortably on



the inherited results of somebody else's work. The work is there, but another person has done it and has handed on the profit. But if we understand the world aright, it is today intent on taking away the profit before it can reach the beneficiary. This is a very important consideration in the discussion of self-reliance.

If a man works hard and piles up an excess to pass on to others who shall come after him, and in whom he has an interest, and then is told that his beneficiaries are not going to be allowed to possess it, one thing is pretty sure to happen. The next man who thinks of acquiring an excess will pause. He will say: "If my heirs are not going to be allowed to inherit anything from me, I will see that there is nothing for anyone to inherit." In other words, he will be strongly tempted to consume all that he gets as he goes along, and to get no more than he comfortably needs.

We can think of no better way to put a dead hand on the accumulation of world wealth. If such a policy were pursued, the world would in a generation or two begin to wonder what had happened to it. Even if everyone were fed out of the public crib, there would be much less in the crib. A good many persons would have to die off in order that the rest might have as much as they had before, and probably that would not accomplish the result.

You cannot feed many persons out of the public crib very long without sending civilization down hill at a pretty rapid pace. The Roman emperors played that card, but failed to take the trick. But of course we should not be foolish enough to try that now. That is, we think we should not. But old things have a way of cropping up with new names. The trouble was that the Roman emperors were afraid of the people, and they gave them bread and circuses to keep them from interfering in politics. Sabotaging is a comparatively new word, but the thing is not new.

Crawling out of work was a joyful pursuit in the days of the Roman emperors, but like everything else it had to be paid for, and the emperors had to put up the cash, which they got by draining the economic resources of the empire, just as we have been draining the resources of this nation by the Adamson law and a good many other foolish devices. The emperors threw common sense to the winds. Common sense should have told them the right way to do it, but they preferred the wrong. Possibly they were weak in common

sense, or possibly they did not care what the result would be when they were gone.

History has recorded what happened on that occasion. Most persons who have had a common school education know what history has taught, but it all happened so long ago that we think it can't happen again. Pompeii was destroyed by a volcano in the year 79 A.D., which was pretty long ago; nevertheless St. Pierre had a dose of the same nature in 1907. It is well not to take too much for granted—a thousand years with the Lord are as one day. What has been will be, granted the same conditions. If the conditions that produced the Ice Age are ever duplicated, the inhabitants of the temperate zone will be trekking rapidly towards the equator.

What is it that has kept the human race from going to smash during the countless centuries it has inhabited this earth? The thing represented by the word "authority." Experience has taught that if human beings are going to live on this planet otherwise than as brutes, there must be a recognition of authority. Authority is a rather large word. It may mean obedience to an individual or a group of individuals, or it may mean obedience to principles of action that have been clearly attested by experience—the only test possible. Nothing can be had in this world without conditions. If we don't care to accept the conditions, we can't have the thing. Occasionally we may appear to have it for a time, but that only aggravates matters. The longer we infringe a law the worse the punishment in the end.

We may fight against men and overthrow them, but we can't overthrow the principles which the power outside ourselves has laid down for the governance of human affairs. Wise minds have formulated these principles for us, and history has recorded the manner in which the principles have been applied to date. In the past these principles have been applied with a fair measure of success. They have not by any means been applied as well as they might have been, but they have been held in sufficient respect to produce what we call civilization.

But today wise minds seem to be held in light esteem. Our knowledge of the past is so scanty that we cannot recall what history has taught. The few who possess a knowledge of what she has taught are held in small regards—and this at a time when human affairs call for more knowledge than the race has ever yet had to exercise.

In this connection we are reminded of a remark of Mr. Gilbert Murray on the Peloponnesian War. That was a diminutive struggle in comparison with the War of 1914, but it corrupted the finest civilization the world has ever seen.

"Such times called forth naturally the men that suited them. The assembly cared less to listen to decent and thoughtful people, not to speak of philosophers. It was feeling bitter and fierce and frightened, and it liked speakers who were feeling the same.

"We must distinguish carefully between two motions—Enlightenment and Democracy. They happen to have gone together in two or three of the greatest periods of human progress and we are apt to regard them as somewhat necessarily allied, but they are not. Doubtless Democracy is itself an exalted conception and belongs naturally to the ideas of the Enlightenment, just as does the belief in Reason, in the free pursuit of knowledge, in justice to the weak, the wish to be right rather than to be victorious, or the hatred of violence and superstition as such. But the trouble is that in a backward and untrained people the victory of democracy may result in the defeat of the other exalted ideas."

That was certainly true of the ancient Athenians, who are not usually stigmatized as backward. And it appears to be equally true of the modern Greeks. The latter, like the former, have used fine words while refusing to perform fine deeds. It seemed to be a passion with the ancient Athenians to discard their great statesmen in the full fruition of their powers. The modern Greeks are quite as bad. The Anathema of Alcibiades' day was effectually employed against Venizelos only a few years ago. As the ancients abandoned Pericles for Cleon, so the moderns discarded Venizelos for Constantine.

The lobby of Democracy is, and always has been, crowded with wild beasts (lions and jackals alike.) Common sense advocates a stockade to keep them out. But common sense is not a common possession. For all the Athenians, and strangers which were there, spent their time in nothing else, but either to tell or to hear some new thing. There was always some new thing in the lobby. It might be a lion, or a jackal, or a fond gazelle. To the Athenians it mattered little which it was. Nor does it seem to matter much to us of today. We love the glamor of uncommon sense—common sense is prosaic.

## A Star Gazer

BY H. A. LEMMON

[A cheerful, plainly dressed, self-effacing little old man was frequently encountered in Washington during the war. One day a friend, pointing him out, said, "Lemmon, there is a story in that man." It took a long time to get it, but here it is, patched together from fragments, obtained from many sources other than the man himself. The story constitutes a portion of a talk by Mr. LEMMON, of the Personnel Department of Stone & Webster, to employees of New England companies.—THE EDITOR.]

A LITTLE more than forty years ago there stood on one of the soot-shrouded hills of South Pittsburg a lowly little cottage, which was entirely appropriate to its rather squalid neighborhood and neighbors. It was occupied by a couple well along in middle life. The wife's name was Phoebe and the husband's name was John. John was an industrious workman who for over twenty years had labored in the pattern shop of one of the great steel mills. A few too brief years in public school apparently comprised his educational equipment and did not seem to have fitted him for much that he had not already accomplished—and that was little. It must have seemed to John and to Phoebe, as it did to his employer and to their neighbors, that having passed the age of forty years—untrained and uneducated—their future could very reasonably be expected to be but a reflection of their past—without promise of escape from the routine.

They were kindly people and highly esteemed by their neighbors, and more particularly by the children, who had a way of coming from a considerable distance and gathering about the cabin just before nightfall. Then after dark John would call these youngsters to him and they would walk up to the top of the hill a few yards back of his home and with breathless interest they would listen while John told them of the stars and the planets as they came into view. Their parents rather approved this nightly excursion of their youngsters, because plainly they were not in mischief and there didn't seem to be any harm in the man who lived in the stars.

Thirty-five years before, John, then a boy of seven, had come into unexpected possession of a whole five cent piece, which he had at once invested in gaining a peep at the

heavens through the telescope of an itinerant street fakir, and from that day on he dreamed of those far away worlds and their mystery.

He had gained several books of astronomy, which became progressively easier for him to read and to understand. His all-compelling interest in this one subject cut him off from sympathetic intercourse with his fellow workers, whose minds were occupied with the more practical things of existence, but in losing their companionship he gained a far greater one—that of his wife, and it was she who one night suggested that they must have a telescope of their own through which they might read the wonderful story.

There were some savings, a very few hundred dollars; and after much discussion and much planning it was determined to purchase one. The decision once arrived at, the couple set forth boldly one evening upon the great errand. To their dismay they learned that an instrument such as would be of real use to them would cost \$1800—more than three times the sum of their savings. It was a discouraged pair that climbed its way back to the hills, and it was away late in the night when there blossomed forth the suggestion—“We will make a telescope.”

It was no part of their plan actually to construct the lens, but merely to build the mountings. John went to work. In an old shed back of his cabin he began the assembling of odds and ends from the scrap heaps of all of the mills. In a year he had built up a boiler, an engine that would run, and a serviceable lathe. Eighteen months more found the mounting for the new telescope completed, and they still had \$300 of their savings intact.

Once more with swift beating hearts the couple set out for the instrument house, this time to purchase merely a lens, only to learn that it would cost in excess of \$1200—that their two years and a half of labor represented the smallest part of the expense necessary. Like an inspiration there came to them the determination, “We will make a lens.” The raw material was easily within their means, and after a few more months of work getting the little shop equipped for this additional burden, the work of grinding began. Every Sunday, every holiday and every night, many times until past midnight, the work went on after the long hard day at the mill and at household tasks, until after three years it

neared completion only to develop disastrous limitations which made it worthless.

Five years and a half of wasted effort! It took courageous hearts to go on, but go on they did and the work of grinding out a new lens began immediately. Practice made it easier and only two years were required to bring this second attempt to its final stages.

All of that part of Pittsburg took an interest in the work going on in that little shed on the hill, and as the bit of quartz assumed form it was esteemed a neighborhood achievement. The grinding and polishing completed, the perfect product was ready for silvering and mounting. Certainly John and his wife would earn the thrill of satisfaction which would come to them with their first glimpse of those other worlds through an instrument of their own construction. Perhaps that one moment would compensate them for the labors and the sacrifices of nearly eight years. Possibly it was the thought of those years which caused the hand to tremble; but whatever it may have been, the lens slipped, fell to the floor, and was shattered into a hundred fragments.

Swiftly the word went around and the despair and sorrow of the man who lived in the stars was felt in many humble homes that night. Children came by the score to stand in silence, too mindful of the great calamity which had befallen their friend to offer consolation other than by their presence.

Word of the disaster reached the steel mills before John himself arrived the next morning and the kindly man's fellow workmen were all sympathy, for it had been years since any one had derided the dreamer. The noon hour found him seated on a bench alone, head bowed down, eyes staring at nothing, dinner bucket unopened. His foreman came to him and laying a friendly hand upon his shoulder, said:

"John, I am sorry. But it is the best thing that could have happened to you. No man can work all night at home and all day in the steel mill and keep his job. You must forget this whole nonsense."

It was a long afternoon—seemingly interminable—but the end finally came and John left the mill for home. His bearing told too well of the great blow which had come to

him. He was fifty years old—still a laborer—beyond the years when mere determination compels success. It seemed that he must accept the advice and the warning of his foreman. With an effort to throw off his dejection he staggered into his cabin. Phoebe didn't meet him; she wasn't in the kitchen; there was a light in the little shed out behind; he went out and looked into its window. A fire was under the boiler, steam was up, a fresh bit of quartz was in the lathe, and as he opened the door his wife said quietly, "We'll make a new one." And they did, successfully completing it this time after his fifty-first birthday.

Soon there crept into the newspapers of Pittsburg crude contributions from an amateur astronomer. They appeared at rare intervals and in inconspicuous places, but they began to attract the attention of a scientist here and another there, and some delightful correspondence ensued. Finally one of these articles, announcing a hitherto unknown movement in the heavens, came to the attention of Professor Samuel P. Langley, a former Dorchester boy—himself to be later ridiculed and hounded into a premature grave because he sought to demonstrate that a heavier-than-air flying machine could be successfully constructed. Dr. Langley cabled to observatories in Europe, one in Asia, and telegraphed to California. The reply came that the Pittsburger was correct in his calculations, and then Langley took the train and hunted up the laborer of the steel mills. We wish we might know just what passed between them, the workman in overalls and the great scientist who was famed throughout the civilized world, but we do not other than that visit marked the turning point.

Gradually the fame of the Pittsburger spread, and as time went on the great observatories of Germany and the United States became owners of lenses of wonderful perfection turned out by the hand of this amateur grinder. And then came the 72 inch parabolic mirror for the Dominion Observatory, Victoria, Canada, and all of the scientific world knew of the man who had accomplished the seemingly impossible. A few more years, and he was famed as the world's greatest maker of instruments of precision. It is useless to endeavor to recount his achievements. They were epoch-making in his world, but his world is not ours and we would not understand the significance of many of them.

France wanted to establish its standard of measurement—the metre. It had a bit of platinum, a metre in length, preserved under glass and carefully guarded, but even platinum does contract and expand to some degree under temperature changes and handling does wear it, however little. So France must have a measuring stick which would never change and which would be indestructible. It came to America, to Pittsburg, and asked John Alfred Brashear to do this job. It was conceived that these standards of measurement could be determined in wave lengths of light, which would be unalterable. But first John Brashear must construct an instrument to be known as the interferometer, using a series of light refracting plates. These plates were flat and their surfaces must attain a degree of perfection never before even approached by anything in existence. It was accomplished. They were planed on a machine which would stop automatically when any error in their perfect flatness equal to 1-800,000 of an inch was encountered. One eight hundred thousandth of an inch!

The years remaining to John Brashear were busy ones, and full of honors in his chosen field. One of the features of his world-famed factory was that it owned no patents and had no secrets. The foremost scientific societies and universities of all lands conferred marks of distinction upon him, and when Governor Brumbaugh appointed a commission of prominent people to determine who was Pennsylvania's most distinguished citizen, its members unanimously designated Dr. John Brashear, or "Uncle John" as he was better known.

Upon retiring as president of the Society of American Mechanical Engineers in 1915, he took from his pocket a bit of thin steel approximately the size of a safety razor blade. Its value was placed at over \$100,000 simply because its microscopically ruled surface was so perfect that a single ray of light striking it was instantly shattered into a thousand fragments. It was true to within 1-3,000,000 of an inch.

On Dr. Brashear's seventy-fifth birthday there was given a dinner which will long be remembered in Pennsylvania. Alexander Graham Bell, Charles M. Schwab, Henry Clay Frick, Rear Admiral Robert E. Peary, and many other men of high achievement joined Uncle John's neighbors in paying him homage. One thousand people sat down at dinner and the table was piled high with telegrams and cablegrams of



congratulation, from the President of the United States, from rulers of foreign lands, from scientific societies, from institutions of learning, and from over thirty thousand of his less known but well-beloved neighbors.

In the receiving line were the Jew and the Christian, the Protestant and the Catholic, the world-famed and the obscure, the rich and the poor. There were even people whom the doctor had rescued from privation; the most prominent educators, social and financial leaders—people from all stations in life down to the dirty little newsboy with his papers under his arm. There was a deaf and dumb man who had known the doctor in other years, and who brought his congratulations and best wishes written on a paper so that he would not take up too much time, and an Italian laborer who was attending night school in the neighborhood and who came running in to speak the only words of English he knew, "I wish you many happy returns of the day." There were delegations from the School for the Blind, the Newsboy's Home, and from many other institutions and societies, a crowd of colored people who had had a share of his loving service, and—by no means least—a great group of parents, poor people, whose children had been helped along life's road by the kindly Pittsburger.

Three years before his friends had founded the Brashear Settlement Association, preserving in its grounds the old cottage where the doctor had spent his younger years. It is called "Inspiration," for together with the rude shop in the rear it will long point out to the lads who are being helped along there that from humble beginnings one may rise to greatness through hard work.

About four years ago his wife, whose perfect companionship and understanding had unquestionably been the great source of his inspiration and his courage, passed away and her ashes were tenderly enshrined in the base of the great telescope of Allegheny Observatory. A little over a year ago his were placed by her side. It has not been thought necessary to alter the inscription he himself chiseled to mark the last resting place of his comrade of so many and eventful years:

"We have loved the stars too fondly to be fearful of the night."

## The Permit Celebration of the Shogawa Hydro-Electric Company

The interesting description of the celebration here portrayed is taken from a letter written by Mr. E. C. Macy, in charge of the work of Stone & Webster in Japan. Explanatory notes in brackets have been added in the Boston office.

The Japanese Government Permit which the Shogawa Hydro-Electric Company has been endeavoring to obtain since last January was signed, sealed and delivered on July 16, 1922.

[This permit covers the proposed construction of the highest overflow dam ever built in Japan, together with a hydro-electric station with installed machinery capacity between 30,000 and 40,000 kilowatts, and an 18-mile transmission line. The dam will be 200 feet from river bed to crest, and about 235 feet above foundations. It is designed for a maximum depth of overflow of 15 feet over the crest, which is to be provided with Tainter gates. An auxiliary hillside spillway is also provided. The work covers many problems of an unusual and stupendous nature.]

Preparations were immediately begun for a grand celebration at the dam site and little else was accomplished during the following two weeks.

On the night of July 27, Mr. C. A. Bigelow, Mr. L. N. Reeve and I accompanied Mr. S. Asano, President of the Company, and the Directors to Aoshima to attend the celebration which took place the following day. It turned out to be quite a pretentious affair and is said to have cost the company about seven thousand yen (\$3,500).

Early on the morning of the 28th, we went to the dam site in boats. The core drilling shop had been torn down and the lumber used to build a tent-covered platform on the projecting rocky point at the dam site just below where the small creek empties into the river. The ceremony was conducted by six white-robed Shinto priests, who occupied chairs along one side of the platform. Seven chairs on the opposite side were occupied by the Vice-Governor of Toyama Prefecture, the Chief Engineer of the Prefecture, two other Government officials, Mr. Asano, Mr. Nanbu and myself. A small altar or shrine stood on the river end of the platform.



SHINTO CEREMONY ON BEGINNING CONSTRUCTION BY THE SHOGAWA HYDRO-ELECTRIC COMPANY

A small pile of sand had been placed on each side of the shrine. In front of the shrine stood a narrow table or shelf, on which the priests during the ceremony placed nine trays containing the food offerings of rice, rice cakes, two kinds of fish, vermicelli, radishes, apples, seaweed and sake.

[A Shinto ceremony was performed as being the original and present national religion of Japan, and as being customary for a new and unusual enterprise. A temporary shrine or altar consists of a certain kind of tree, in this case planted in a tub, decorated in white streamers to indicate its holy character and to ward off the evil spirits.

Shintoism centers around the worship of the Mikado, a direct descendant of the first Emperor, who was a god, or rather related to the principle god, the sun. As the sun brightens the day, so is the Emperor supposed to make happier the life of the nation, guarding and directing its destinies. The religion also includes ancestor worship, and teaches loyalty, patriotism and devotion to the nation.

The offering of the finest of the most common foods to the spirit has been the custom of generations. After the ceremony, these foods are eagerly sought for by the people as being uncommonly holy and pure.]

Near the end of the ceremony platform away from the river was a small open shed, under which sat three red-robed musicians and the trays of food offerings and a white-robed attendant. The crowd gathered around outside.

The ceremony began by the High Priest, who sat next to the altar, rising and after bowing to us and the crowd, facing the altar, and bowing again, then stepping backward two steps and clapping his hands twice. He then faced about, bowed and took from the sleeve of his robe a short document which he read, after which he bowed again and took his seat. Each of the other five priests then did likewise in turn.

The food offerings were then brought, one tray at a time, by the priests' attendant and passed from one priest to another until they reached the head of the line and were placed by the High Priest on the table before the altar. Then came two shovels. The priest handed the first to Mr. Asano, and the second came to me just as Mr. S. Taketa



MR. S. ASANO, PRESIDENT OF THE SHOGAWA HYDRO-ELECTRIC COMPANY

came up behind me and whispered that I was to assist Mr. Asano shovel the piles of sand into the river as the first work done on the dam. Mr. Asano took the pile on the priest's side of the platform and I the other. I made one mistake, in that when through shoveling I did not lay my shovel down on the spot but brought it back and handed it to the priest. Mr. Asano says it appeared that our work being completed I thought the shovel should be returned to the tool box.

Next two small hand sickles, such as are used for cutting rice, were brought and handed to Mr. S. Nanbu, Managing Director and another official, who advanced to the spots from which the sand had been removed and pretended to cut something, symbolic of reaping the rewards of our work.

Next came a tray containing a number of small branches with pieces of artistically cut white paper tied on each small twig. The tray was first presented to the Vice-Governor, who arose, took a branch, bowed to the priests, then to us and the crowd and advanced to the altar, where after bowing again he placed the branch on another tray. He then stepped backward two steps, clapped his hands two times, bowed, wheeled about-face, bowed and took his seat. The remainder of us did likewise in turn.

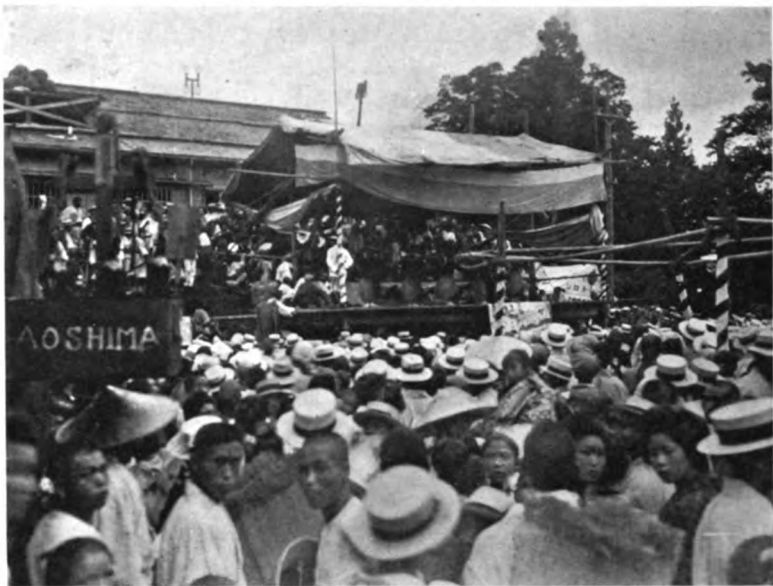
[Oftentimes these decorated twigs, cut from the same holy tree as that comprising the temporary shrine, are waved back and forth to ward off the evil spirits from the locality, and in the present instance signified the hope of each for the successful completion of the enterprise.]

Thus the work of building the dam was properly and religiously started. May the actual work be as successful as the ceremony!

The officials then took to the boats and proceeded down the river for the main celebration, which was to take place at the office beginning at 11 A.M.

The two cottages which had been occupied by Mr. and Mrs. Reeve and by my family had been arranged for rest rooms for the invited officials, and the drinking of Japanese refreshments was going on merrily when I arrived.

At the office the space between the two wings of the building had been floored over with lumber, obtained by dismantling the drilling barges, and a stage or raised plat-



THE CROWD AT THE SHOGAWA CELEBRATION



WAITING FOR THE CEREMONY TO BEGIN

form erected along the back or river side. This space had been covered over with canvas and the windows and walls removed from the sides of the building facing this space so as to make one large room. The room had been well decorated with flags, flowers and bunting, and an attractive fountain provided in front of the stage by surrounding one of our fire-protection hydrants with a neatly trimmed bank of evergreens. Tables and seats had been provided for six hundred invited guests. The tables were heavily laden with eatables and liquid refreshments. Besides the usual box of gohan (boiled rice) there were cakes, fruit, beer and about six bottles of sake for each guest and a furoshiki (package carrying cloth) with the company's insignia woven in it, for use in carrying home what could not be eaten.

The celebration was opened by a speech by the Vice-Governor, followed by a speech by Mr. Asano. Speeches were then made by two burgomasters, after which we were invaded by about fifty Geisha girls and the eating, drinking and dancing began. The usual custom of going around and drinking to the health of all friends and acquaintances was followed. All the while the dance was on and some very pretty dances were staged.

Provisions had been made outside of the building for entertaining the women, children and uninvited guests. A raised platform had been erected for Geisha dancing and also a Japanese wrestling ring.

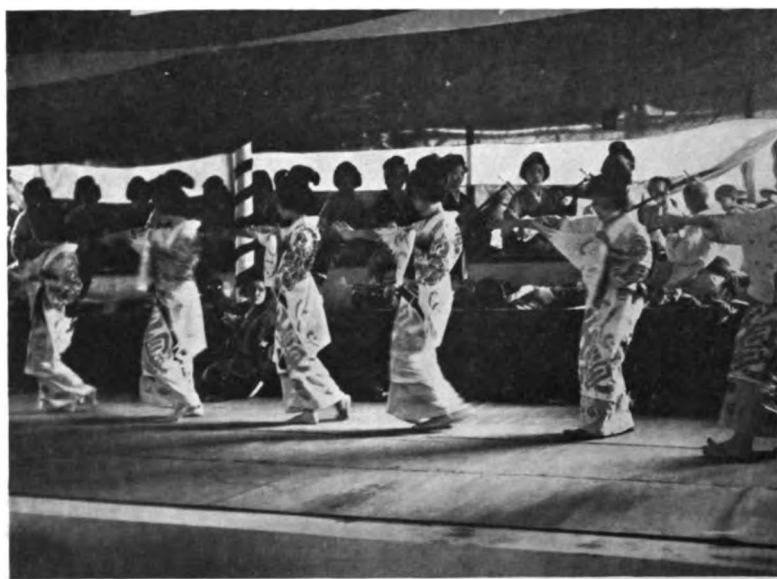
[Japanese wrestling varies from our idea of it, in that it is conducted upon a sanded area enclosed by a circle of rice bags. The object is to force some portion of the opponent's body outside of this ring, and does not necessarily result in a throw. The participants are quick and cat-like in their movements. There are some fifty legitimate holds, and sometimes the result becomes a question of endurance and strength when the opponents become locked, neither one gaining an inch. The struggle may be over in a few seconds of quick action, so rapid that the eye can scarcely follow the manoeuvres, or it may last 15 or 20 minutes of terrific muscular effort.]

Platforms had been placed on top of the office and on the dormitory from which several barrels of rice cakes were thrown to the crowd. The merrymaking, singing, dancing





**TENT COVERED PLATFORM AT SHOGAWA CELEBRATION**



**GEISHA DANCING AT SHOGAWA CELEBRATION**

and wrestling continued all the afternoon. It is estimated that from two to three thousand people were in attendance.

That evening Mr. Asano gave a special party for us Americans and the principal Japanese employees at the Kanaya Hotel. He sat at the head of the feast with me on his right and Mr. Bigelow on his left.

## Modern Innocents Abroad

BY LAURENCE O. PRATT

[Mr. F. S. Pratt, of Stone & Webster, Inc., spent last summer in Europe with his family. On his return he was promptly requested to furnish the *STONE & WEBSTER JOURNAL* with an account of his adventures. He managed, however, to escape this ordeal by inducing one of his sons to undertake the task. The following highly entertaining article is the result.—THE EDITOR.]

My dear Mr. Whiting:

When my father came home a few nights ago, and announced that you had asked him to write an article on his trip, I saw at once that there were going to be difficulties. In the first place, father hates to write, even when there is a chance of publicity, and then his large family takes up most of his spare time. Some one is always "using" father. I also realized that any reticence on his part would appear suspicious, and so I immediately offered to take the burden on my shoulders in order to "pay a dividend" on my education. I thought that perhaps I could convince people that father really did go to see the sights.

On June 24, a small but select crowd was gathered on the dock to see us off. Everybody was anxious to say some last word, and the resultant medley of noises reminded me very much of the time a dog got into our hen coop. The *Pittsburgh* was scheduled to sail at twelve, and about ten minutes before the hour, the boat's whistle began to blow. When the people on the dock finally realized that it really was a whistle and not an earthquake, they waved their hats and handkerchiefs frantically. They might have saved themselves the trouble, for it was only a warning blast. It was fully ten minutes before the boat began to move off amidst a shouting and yelling that was almost deafening. As the blurred mass of waving white became indistinct, people turned their attention to the fast disappearing sights of Boston harbor. They began to appreciate for the first time what a really wonderful country the U. S. is. They took out their cameras, and snapped pictures of the sky and the water, and in fact everything that was a part of the good old America.

In the midst of this excited flurry, the bugle for lunch blew. We should have liked to stay on deck and get the last possible view of land, but father had taught us always to put business before pleasure, and so we went below.

It was the maiden voyage of the *Pittsburgh*. All I can say

is that it was not half as fast as most modern maidens. Ten long days passed before we reached Liverpool, where, after the usual formalities with the customs, we were finally able to get free with our baggage. "Free" is not a good word, however. If you could have seen father nervously counting out thirteen bags, and half a dozen umbrellas, you would understand why. But it did not take us long to get used to letting father do it. Finally he obtained a porter, and had all the luggage piled onto a hand truck. The result was something like the Leaning Tower of Pisa. Indeed several people were rather rudely bumped because the porter was unable to see over or around his load.

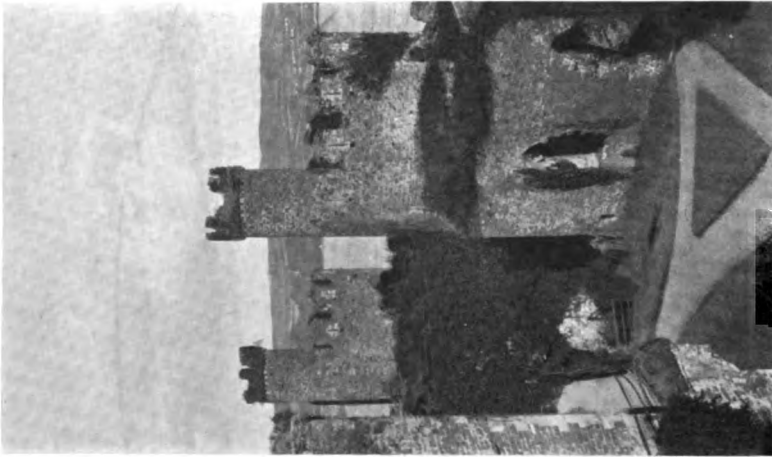
We waited on the wharf for a boat to carry us over to the other side of the river, where we were to take a train for Chester. Father was trying to read the *London Times*. He was busily engaged in looking for news on the first page. The best he found was a message something like this: "Dumbbell—Meet me where the moon shines bright. Jim." After a while, he learned that the "Agony Column" was only meant for sentimental lovers or people who had lost a dog, and that the real news might be found amongst the real estate advertisements on the fourth page.

At last we caught our boat, and reached the train. It was drawn by one of those toy locomotives that the English delight in using. I pitied the poor little thing. I did not see how it could possibly pull such a long train, but after we started, I saw my mistake. The telegraph poles went by so fast that I thought there was a board fence along the track.

We reached Chester about noon, and took a taxi up the main street to the hotel. It was the quaintest little town I had ever seen, with its cobbled streets and its stores that looked very much like private houses. Few of them were more than two stories high, and they all had peaked roofs. There were also examples of that curious but picturesque brick and wood house that the English alone know how to build.

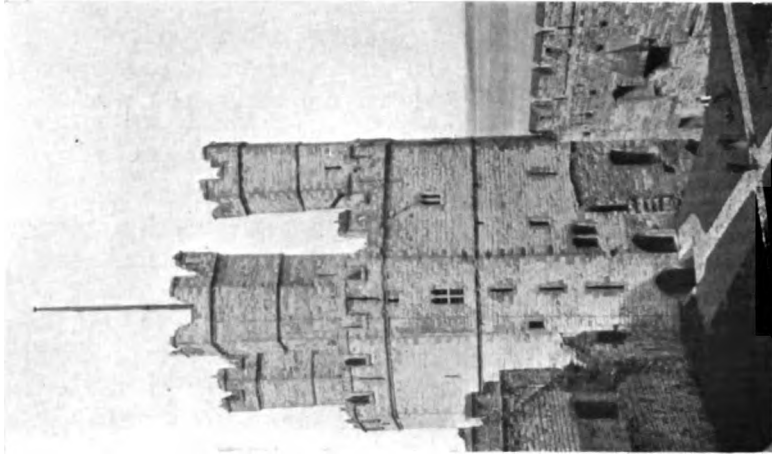
After lunch and a brief walk around the walls of the city, we started on perhaps the most beautiful phase of our journey—a motor trip through Wales. We had a nice lively chauffeur who did not seem to mind much whether he was on the road or taking a short cut across the sidewalk.

We were driving through one of those pleasing old English villages with its thatched roofs and its leaning walls, when



**CONWAY CASTLE**

A picturesque ivy-covered ruin perched on a high knoll that commands the town of Conway.



**CARNARVON CASTLE**

An extensively restored medieval castle of which Lloyd George is constable.

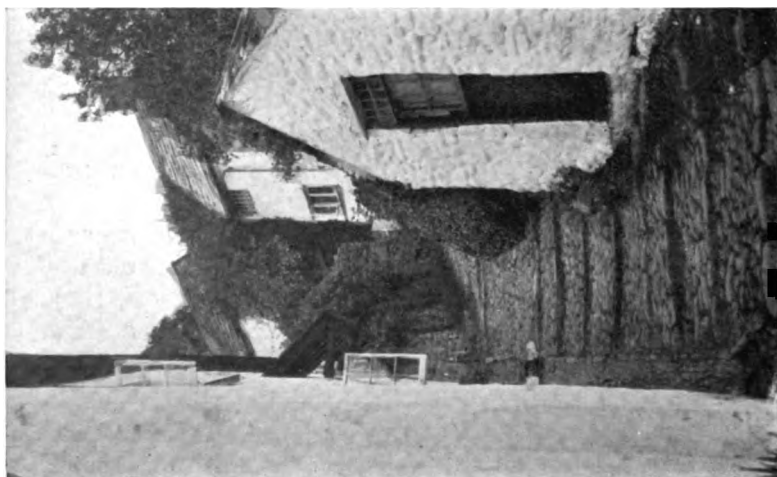
suddenly mother pointed excitedly. "Oh look! See the old castle." Well, she had good eyes to tell it was a castle. It looked to me more like a boiler factory after an explosion, with nothing left standing but part of the chimneys. Of course we had to humor her, and so we went over and examined the thing very carefully. Father found the place where the stairs used to be, and mother found a place where there used to be a room, and Ted found the place where the drawbridge used to be. I went off and picked daisies.

Well, when the family had finished building castles in the air, we moved on to our next stop. This was Conway Castle, and it did not take half as much imagination to see that it *really was* a castle. We were first impressed by its immense size and the number of its turrets. In places, parts of the walls had fallen out, but mostly it was in a reasonable state of preservation. Inside, we saw the courtyard, the banquet hall, the queen's chamber, and the gloomy dungeon. They all reminded one of the grandeur that has passed—of the queen, sitting in state within her tapestried walls; of the knights entering the courtyard in their clanking armor; of the priest praying within his vaulted chapel; of the prisoner, madly raving in his dungeon.

The construction of the towers was very interesting. Above the main tower, they had built a smaller one. This could only be reached by crossing the top of the main tower. When the besieged were hard-pressed, they retired to the small tower, and from the top of that, they fired a withering shower of arrows on the heads of their enemies as they were trying to gain the entrance.

The stairs were also interesting. They became narrower as one reached the top, so that a mere handful of men could defend them. As some of their number were killed off, they moved up a few steps, in order to present always a solid front to the enemy.

We spent the night at Bangor, and the next day we saw Carnarvon Castle and Bettws-y-coed. All day, we were traveling through interesting, rugged country. On both sides of the road, lofty mountains stood, their sides covered with dry brown grass, and heather, and rocks. Perhaps this would have become monotonous if it had not been interrupted by occasional tumbling mountain brooks. Or sometimes a turn in the road would reveal some new vista—a farmhouse over-



CLOVELLY

The main street, showing cobble stone steps



RAGLAN CASTLE

The photograph shows the main entrance with strongly fortified towers, and part of the old moat



**STONEHENGE**



**VIEW WITHIN THE WALLS OF THE TOWER OF LONDON**





**BROEK-IM-VATERLAND**

View showing canal and wide expanse of flat country



**VOLENDAM**

A street in an old fishing village that remains unchanged for centuries

hung by ancient elms, or a lake, whipped into white-caps by the fresh breeze. Frequently we passed through white villages that nestled in among the hills.

That night we arrived again in Chester, and the next day, we moved on to Leamington. We saw Warwick and Kenilworth Castles the next day. People were living in Warwick, and so it was not half so nice. People have no right to live in a castle. They always ought to be old and ruined and deserted.

The next day brought us to Stratford-on-Avon, where we visited the John Harvard House and Shakespeare's birth place. The latter was situated over a butcher shop. It was very picturesque with its windows filled with small panes of glass, but it was disappointing to see all the walls in the room where Shakespeare was born covered with initials. There was some consolation in the fact that Scott and Carlyle had signed their names there, too. Since that time there has been a rule passed, forbidding writing on the walls, but I offered to do it for them, thinking it would be a shame not to have my name along beside Scott's and Carlyle's. They didn't see it that way.

Passing over our stops at Raglan Castle, Gloucester, Tintern Abbey, and our trip up the Wye Valley, we come to Lynmouth and Lynton, the former built at the foot of a steep hill, and the latter on top. We walked through the famous Valley of Rocks, which offered the most beautifully rugged scenery we had yet seen. Next we came to the quaint fishing village of Clovelly, to Exeter, and finally to Salisbury.

At Salisbury, we saw what was in my opinion the most beautiful cathedral of all those we went through during the summer. Its tower was four hundred feet high—the tallest in England. There was a certain quiet dignity about the outside, and the interior was equally impressive. The vaulted roof and thick pillars were built for durability, but at the same time, there was a gracefulness and fitness about them which made them very pleasing to the eye.

July 11 saw us in London. We found the city just as big and smoky as it had been made out to be. There were taxi cabs galore but very few private cars in London. Everywhere one looked he would either see a taxi or a motor bus.

On the way from the station to the hotel, we passed Buck-



**A BUSY CANAL IN AMSTERDAM**



**THE CHEESE MARKET AT ALKMAAR**

ingham Palace. It was not a very imposing building. Indeed, I think what attracted our attention most were the guards with their high bear-skin hats and their bright red coats.

When we were finally settled in the hotel, we all had a feeling that we did not want to move. It was probably a kind of mental indigestion. However, we did see Westminster Abbey, the Tower of London, and St. Paul's Cathedral, of which we had the history explained to us in whispers from a distance of a hundred feet—across the rounded dome of the famous Whispering Gallery. We managed to get away from the crown jewels in the Tower without taking anything.

If we did not see all the sights in London, we were there long enough to find out that the English are the most polite, obliging people in the world.

On July 17, we crossed the English Channel in a small steamer which was so deserted that it seemed almost like a private yacht. We landed at Rotterdam, and took a taxi immediately for the station, where we were just in time to catch a train for The Hague. We amused ourselves during the trip by trying to read the signs in our compartment. We decided that the Dutch language is a mingled mass of nonsense. What sensible country would say, "Verboden te rooken" when they might just as well say "Don't smoke"!

We enjoyed The Hague, but it did not quite come up to our expectations. We had for a guide an old coachman that did not know a word of English. I don't believe he was "official," because when another man came along all dressed up with a badge on his coat, there was a terrible row. They began talking Dutch so fast and furiously that I don't see how they even understood each other. It sounded to us more like a cat fight than anything else. After a policeman had placated the two, we went on to the Parliament Buildings, and finally to an old prison where Cornelius de Witt had been confined. There was quite a crowd waiting outside the door, and so we had to stand in the street for some time. In the meanwhile, some Dutch school children came along, and they began to sing patriotic songs. At least that was what we took them to be, although they might just as well have been the latest "jazz" music so far as understanding them was concerned. Finally we entered the building along with the children. Our guide first explained the instruments of torture in Dutch, and then in English. There was every kind of a device there



**MUSEUM AT BRUSSELS**  
The artistically arranged main room



**VERSAILLES**  
Marie Antoinette's "peasant village"

to make people suffer, and it made my blood run cold to think how inhuman humans sometimes are.

From Amsterdam we took an excursion boat through the canals, visiting Broek, Volendam, Marken, and one or two other "dams." We learned how cheese was made, and saw the Dutch people in the old costumes that they used to wear hundreds of years ago. The small boys and girls were all dressed alike, and indeed the only way you could tell them apart was by their hats. The boys all had little round disks on the backs of their heads.

Marken was particularly interesting and picturesque. The cobbled streets were lined with peaked houses, and occasionally a boy would clatter by in wooden shoes. Like all tourists, we had to buy a pair of those. We also saw the fishing fleet set sail, and, passing through the narrow harbor mouth, spread their brown sails to the heavy breeze. Of course there were the windmills around the country which everyone connects with Holland.

Brussels was the next city we visited. It was a miniature Paris—gay, bustling, busy. We took a morning's ride all over the city in a taxi for two dollars. At least they were not highway robbers in Belgium.

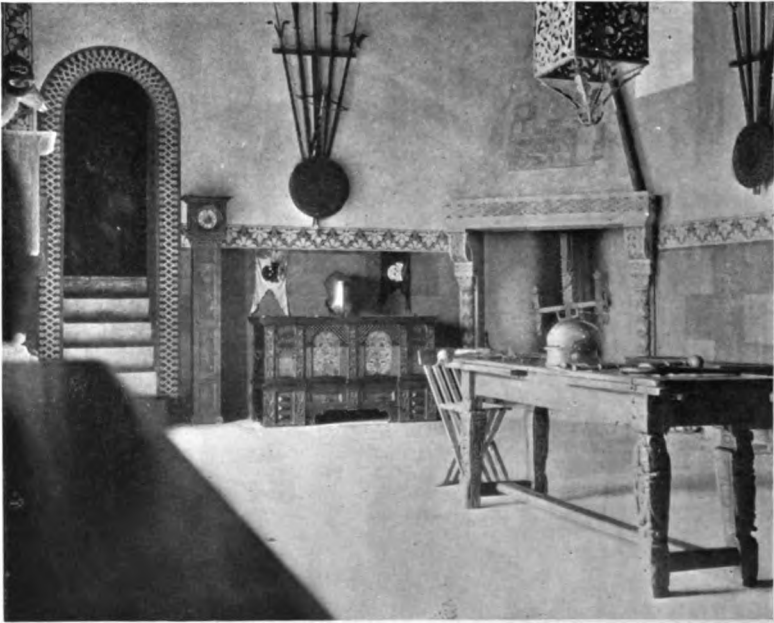
Finally we reached Paris—the Mecca of all tourists. We found it even more wonderful than its reputation. It seemed almost unbelievable that we were really in Paris, that it was really we who were walking up the broad, tree-lined Avenue of the Champs-Élysées, or climbing to the top of the massive Arc de Triomphe, or roaming through those historic streets, or marveling at the pictures in the Louvre.

Our only consolation in leaving Paris was that we were to return before going back to the United States. Perhaps if we had known the wonders we were going to see in Switzerland, we would not have been so sad. Even the trip in the railroad train seemed to go faster than usual. After stopping at Lenzburg and Lucerne, we finally settled down in the little town of Wilderswil near Interlaken. When the weather was clear, we climbed. The rest of the days we wrote letters, or looked at the mountains. It was especially beautiful when the clouds hung low on the mountains—it was so in keeping with the rest of the scenery. They are just the necessary background to the rough, steep mountains, the rugged crags, and the tumbling, rushing brooks. Everything is so immense, so



**SCHLOSS LENZBURG, AARGAU, SWITZERLAND**

The inner court and the clock tower, dating from the sixteenth century



**BARBAROSSA'S ROOM IN SCHLOSS LENZBURG**

On the walls and tables are ancient pieces of armor and weapons of offense. The two skull and crossbones flags, hanging over the chest, were used by German regiments in the recent war

grand, so wild. And then when the clouds rise a little, one can see the snow-capped peaks shining through—a pure white, except for the places where the wet brown rocks glisten, or where the snow can find no lodging on the precipitous cliffs.

We moved on to Montreux, which is situated on Lake Geneva, and from there we saw the Castle of Chillon. It was a very picturesque spot, and of course we took whole films of pictures.

The next day we took a steamer down the lake, and reached Geneva about dusk. The color of the lake is remarkable, in that it is always changing. Sometimes it is a placid emerald green, but when a slight breeze stirs its surface, it immediately becomes a pure sparkling sapphire.

The most beautiful ride in the world is supposed to be from Geneva to Chamonix, and the next most beautiful, from Chamonix to Geneva. We could not miss the most beautiful thing in the world, and so we hired a butcher who claimed he was a chauffeur, to take us along. Soon after we passed the city limits of Geneva, the mountains began to appear through the blue haze in the distance. It looked almost as if some one had taken a black piece of tissue paper, cut it into irregular points, and pasted it across the horizon. When we came nearer, we began to get the beautiful colors of the scene—the brown cliffs, the green trees, and the white foam of a rushing mountain stream. Then there was a waterfall that fell so far it disappeared in the air. Finally, when we were almost to Chamonix, we began to get glimpses of Mont Blanc. It is the purest, whitest mountain I have ever seen.

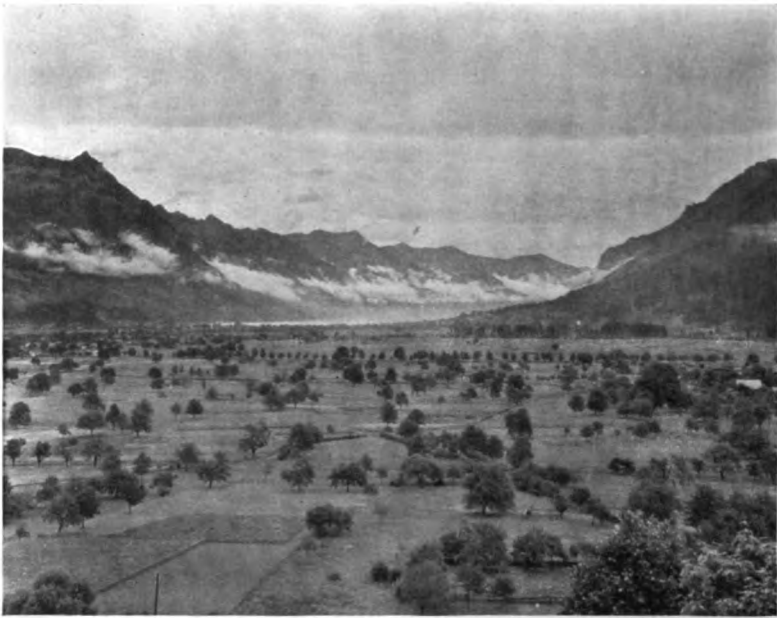
That afternoon, we went up to the Mer de Glace in a train. I think the vicinity must be the most beautiful in the world. On all sides, and almost directly above, the peaks point their fingers straight up into the sky. Harry, Albert, and I crossed the glacier without the assistance of a guide. It was all right until we came to a place where two crevasses joined, thus effectually blocking our way. In such a case, we would either have to retrace our steps, sometimes for almost a quarter of a mile, or jump. This latter alternative was the most interesting, especially when we could look straight down for over a hundred feet into a crevasse.

Soon after returning from Chamonix to Geneva, we decided that it was time to go back to Paris. That was the funniest and most hectic trip I have ever taken, and so for





**AN OLD SWISS HOUSE DATING FROM 1603 AT WILDERSWIL, NEAR INTERLAKEN**



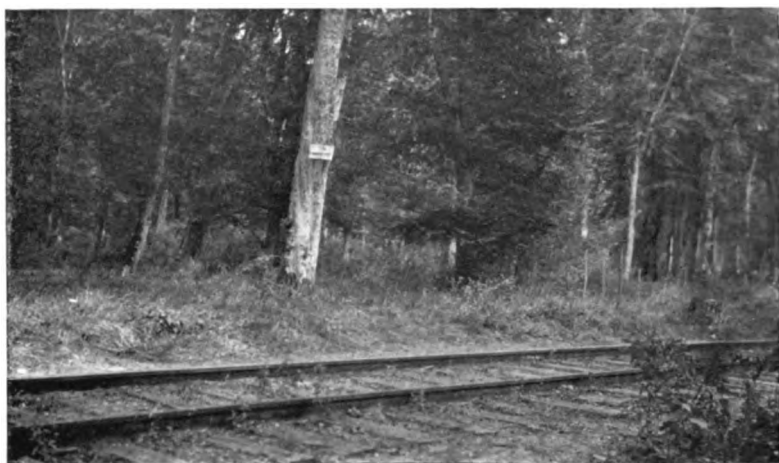
**EARLY MORNING CLOUDS OVER LAKE BRIENZ, NEAR INTERLAKEN**

that reason, perhaps I may be excused for mentioning it here. In the first place, father gave Ted and me all the tickets, so that we could reserve a compartment on the train. We did our share, reserving seats in a first class coach in spite of the fact that we only had second-class tickets. (They say only Americans travel first class, so we usually traveled second.) About ten minutes before the train was scheduled to leave the station, Harry rushed up, and said he had to have the tickets to check the bags and get by the Swiss Customs. Well, there they were with thirteen bags, *and* only ten minutes to get them on the train. Of course the officials had to examine every tooth brush and shoe lacing to see if there was anything worth while keeping. About fifteen minutes later, we, with about thirteen badly packed suit-cases, jammed ourselves on to the train. We waited fifteen more minutes before it started.

Then we had forty minutes of peace, if you call it peace with six people and thirteen bags all in a compartment built to hold four at a pinch. At the French border, the officials asked us if we had any cigars or cigarettes. We said we had nothing except for personal use. After looking through a couple of our bags, he made father undo a bundle of Albert's shoes. Now it so happened that father had placed with the most innocent intentions, three wrist watches in the toes of the shoes in question. I wish you could have seen that official's face when he saw those watches. He almost had a fit. It took us nearly half an hour to convince that man that we weren't experienced smugglers, and the train was due to start almost immediately. We had to take every single, solitary thing out of our bags. Imagine the array with the contents of thirteen bags spread around the custom house. It looked something like a tenement on Monday morning. Well, the last minute, he told us to "*Allez-vous-en,*" and I can tell you, *we did!*

It was lunch time by then, but we had to wait until the train stopped before we could reach the dining car, because there were no corridors running through two of the cars. And when we finally did get in there, we did not have time to finish our meal before they moved us out to make room for another sitting.

Everything went well until supper time. We had tickets in the diner for eight o'clock and along about five minutes of eight we made ourselves ready to leave the compartment in



**COMPIÈGNE FOREST**

Place where Armistice was signed. The sign on the tree reads: "Train du Maréchal Foch"



**VAUX**

View showing a typical ruined French village

case we came to a station. The train was slowing down, and I was just rising to move towards the door, when there was a sudden crash, and I landed very unceremoniously in mother's lap. The train was stopped, anyway. We jumped out, and started to run back where the dining car was. It was more like a football game than anything else, because part of the crowd were moving forward to see what we had hit. After several rather jarring collisions, we finally reached our destination. I never saw such a mess. There were bottles, and broken plates and knives and forks and glasses all over the floor. Meanwhile the car had filled up with a mob of shouting Frenchmen, all yelling for something to eat—but there was nothing to eat off of. Ted's napkin got dirty in the fracas, and he asked the waiter for a fresh one. The latter told him to turn it inside out, and use the other side! And then with the usual accuracy of railroad officials when we asked him what time the train stopped next, he said 8.15, and it was already 8.45. There was no daylight saving, either.

After we finished that meal, they pushed us into the next car, and the rest of the crowd came in to eat. We could not find seats, and we learned that the train did not stop until we reached Paris. We stood up for two hours.

At Paris, there were no porters to meet the train, and so we had to carry the thirteen bags to the taxi ourselves. We ended the evening right by having a blow-out on the way to the hotel.

We spent the rest of our time in Paris wandering through the historic streets, and visiting such places as the Sacre-Cœur, a marble, Mosque-like church that dominates the whole Montmartre, and also in a trip to the battle front. We took this tour in an American car, and an American lieutenant drove us. It seemed quite like home.

We had lunch the first day in Soissons, which seemed to our inexperienced eyes very badly shattered. The Cathedral especially had received more than its share of shells, with only its walls and part of its tower standing. After wandering through the ruined town, we moved on, and got our first glimpse of the trenches. Of course time and the weather had put in their work, so that they had greatly changed since the war. The dugouts, however, had remained practically unchanged. We climbed down fifty feet below ground, and walked in through the dark passages, and glanced into the

rooms where soldiers used to live. The quarters were so damp, so dark, so small, that it made it much easier for us to understand the expression, "War is Hell." I understood for the first time how much our country sacrificed to save the honor of our nation.

Next, we visited Rheims, where we spent the night. The beauty of Rheims Cathedral could never be exaggerated. In spite of the fact that part of the two towers has been blown away, and that the roof is not all there we decided unanimously that it was the most beautiful piece of architecture any of us had ever seen. It is impossible to describe its magnificent grandeur, and even pictures fail to tell the story. It stood as a kind of sentinel over the city, which itself was badly smashed. Indeed, the hotel where we spent the night was only half standing. They were building up the other part with the same dauntless courage we noticed on the rest of our trip.

We went on towards Verdun, passing through the Argonne forest, where the Americans did so much damage to the Germans in the last days of the war. We stopped at the American cemetery, where 14,000 Americans are buried. It is beautifully kept up—so different from the numerous French cemeteries, with their rows of unpainted wooden crosses that announce with monotonous sadness, "Un Français inconnu."

We saw Hill No. 108, the famous place that was mined and blown to pieces by the Germans.

Towards night, we neared Verdun, and passed through a triangle formed by three hills where the bloodiest fighting of the war was supposed to have occurred. Four hundred thousand Frenchmen were killed there, and only ten per cent of them were ever identified. Two towns had stood in this vicinity before the war, but they are there no longer. There are not two stones attached together. Every vestige of human habitation is gone, but in the places where the towns once stood, two signs are fixed to tell us what once was, and is no more.

We visited Fort Vaux, the stronghold on the top of which 8,000 shells landed every day for several months, and where the French resisted even after the Germans were swarming over the top of the fort.

We went on to Verdun, and the next day, passing through

Chateau-Thierry, and other points of interest, we arrived at Paris. We spent the two or three days left to us there in buying last things. We took a very fast train for Havre, and on September 1, we were on board *La Lorraine*, homeward bound. It was a French boat, which was supposed to cross the ocean in eight days and took ten.

I am sure the best sight on the whole trip was the Statue of Liberty. And when we had finally landed and got into a taxi cab, it seemed like Paradise to hear the traffic policeman say, "Move along there, buddy."

## Conditions In Stone & Webster Territory

*The managers of the companies operated by Stone & Webster, Inc., write to the Management Division of Stone & Webster about the first of each month with reference to conditions in their respective localities during the preceding month. A digest of these letters is published each month in the Stone & Webster Journal.*

### GENERAL NOTES

Our 1922 Managers' Convention will be held October 9, 10, 11, 12, 13. Sessions open each morning (other than Wednesday, October 11), at 9.30 o'clock, in room 26, 70 Kilby Street, Boston. (Mason Building, across the street from Stone & Webster Building.)

Luncheons on Monday, Tuesday, Thursday and Friday at 1.30 o'clock, in the Banquet Hall, Boston City Club, 14 Somerset Street.

Tuesday evening at 8.00 o'clock, Tremont Theatre.

Wednesday, October 11, all day outing at the Belmont Spring Country Club, Waverley. Golf and tennis matches with suitable prizes. Buffet lunch in club house served from 1.00 until 3.00 P.M. Trip to and from the club will be made from the Copley Plaza, starting at 9.00 A.M., and returning about 4.00 P.M.

Friday evening, October 13. Closing dinner at 7.00 P.M. at the Copley Plaza.

MESSRS. A. R. HATHAWAY and F. X. HEALY, of the Treasurer's Office, left for Seattle, Wash., on September 25. They will be connected with the accounting office there.

MESSRS. WILLIAM BRESLIN, Harvard, 1922; CHARLES A. DURHAM, University of Maine, 1922, and E. F. STOUGHTON, Tuck School of Dartmouth College, 1922, have joined the forces of the Treasurer's Office.

MR. G. W. SHERIDAN, of the Treasurer's Office, is in New York on his vacation.

MESSRS. W. T. G. NICHOLS and J. C. LEIGHTON have returned from their vacations.

MISS BEATRICE CLARK, secretary to Mr. W. T. G. NICHOLS, has returned to the Treasurer's Office after four months' illness.

The following assistant treasurers visited the Boston office during September: MR. R. O. HIMEL, El Paso Electric Company; MR. G. G. SPENCER, Cape Breton Electric Company; MR. R. B. LANCASTER, Galveston Electric Company; MR. C. F. STEGER, Nova Scotia Tramways and Power Company, Limited, MR. E. C. HART, Mississippi River Power Company, and MR. F. J. GANNON, Northern Texas Traction Company.

MR. WILLIAM J. FARRISEE was married to MISS LINA RHOADES at Cambridge, Mass., on September 12. Both Mr. and Mrs. FARRISEE were formerly members of the Drafting Division.

MR. H. T. EDGAR addressed the Southeastern Section of the National Electric Light Association on the subject of "Accident Prevention" at Atlanta, Ga., on September 14.

MR. RALPH C. PAINE, engineer at the Ponce Electric Company, has returned to the United States on account of illness in his family.

MR. M. C. SMITH, superintendent of light and power, and MR. A. L. POLLARD, assistant chief engineer of the Nova Scotia Tramways and Power Company, Limited, visited the Boston office in September.

MESSRS. DAVIDGE H. ROWLAND, Johns Hopkins University, 1922; JOHN R. SHEFFIELD, JR., Massachusetts Institute of Technology, 1922, and NORMAN S. STAMBAUGH, Georgia School of Technology, 1922, have entered the Statistics Department.

MR. GERALD F. SCULLY has been transferred from the Transfer Department to the Auditing Department.

MR. T. L. SMALL, manager of the Baton Rouge Electric Company, visited the Boston office during September.

MR. HARLAND R. PRIESTLY, of the Statistics Department, married Miss Doris Jepson, on August 26, at West Roxbury, Mass.

MR. I. MAXWELL STOVER, of the Statistics Department, was married to Miss Grace O. Smothers at West Roxbury, Mass., on September 1.

MR. AUBREY E. BEATTIE, of the Statistics Department, married Miss Olive F. Ryan at Hartford, Conn., on September 26.

MR. L. R. NASH has returned from his vacation.

MR. A. S. PRATT has returned from Nova Scotia.

MR. FRANK A. TRACY, secretary to the manager of the Blackstone Valley Gas and Electric Company, Pawtucket, R. I., was married on September 2, to Miss Gladys Huldah Phalen, at Malden, Mass.

MR. C. L. EDGAR, president, of the Edison Electric Illuminating Company of Boston, has announced the decision of his Company to proceed immediately with its new generating station in Weymouth so as to have it ready for regular service by the autumn of 1924. The initial capacity will probably be two 30,000 kilowatt units. The work will be under the direct supervision of Mr. I. E. Moulthrop of the Edison Company, and Stone & Webster, Inc., have been engaged to design and build the plant in collaboration with the company's engineers.

We have been retained by the American Radiator Company to make a valuation of their property for tax purposes.

The Milliken & York Company of Cleveland have engaged our services to make a study and estimate on the cost of the Tittabawassee River power development. MR. ANTHONY is taking care of this assignment.

The American Powder Mills have retained us to make a study and report on the power supply necessary for their mills at Acton and Maynard, Mass.

The G. Drouve Company, Bridgeport, Conn., have requested the services of one of our structural engineers in connection with the examination of one of their factory buildings.

MR. F. G. PHILO, of the Engineering Department, is at present in Michigan, where he is engaged in power station betterment work for the several boiler houses controlled by the Calumet & Hecla Mining Company.

HAROLD E. BRAILEY, formerly of the drafting room, has been transferred to the Engineering Department, and will devote his time entirely to appraisal work.

We have been given a contract by the Insurance Company of North America for the supervision and administration of construction of an office building in Philadelphia, Pa.

We have been authorized by the Western Union Telegraph Company to undertake the following work: design and construction of telegraph building at Harrisburg, Pa.; miscellaneous work in connection with remodeling an existing structure in Albany, N. Y.; design and construction of car repair shop in Chattanooga,



Tenn.; miscellaneous work at plant of the Western Union Telegraph Company, at Punta Rassa, Fla.

A luncheon was tendered REYNOLD M. HARDING, Manager Columbus Electric and Power Company; EARL C. HART, Assistant Treasurer, Mississippi River Power Company; ROBERT O. HIMEL, Assistant Treasurer, El Paso Electric Railway Company; RAYMOND B. LANCASTER, Assistant Treasurer, Galveston Electric Company; CHRIS F. STEGER, Assistant Treasurer, Nova Scotia Tramways and Power Company, Limited; FRANCIS J. GANNON, Assistant Treasurer, Northern Texas Traction Company, and GEORGE K. HUTCHINS, Commercial Agent of the Power Department, Columbus Electric and Power Company, at the Boston City Club, September 12, 1922. In addition to the special guests, the following attended:

HARRY H. HUNT, C. F. W. WETTERER, A. STUART PRATT, MARCY L. SPERRY, FORREST P. DEXTER and ALAN D. DUFF, of the Fall River Gas Works Company; GEORGE A. PIERCE, HOWARD G. PHILBROOK, JAMES B. MAHONEY, CYRUS Y. FERRIS, GEORGE WINTHROP LEE, PHILIP L. WARREN, THEODORE T. WHITNEY, JR., EDMUND F. SAWYER, WILLIAM T. CRAWFORD, LAWRENCE E. EUSTIS, FRED J. BABCOCK, PARIS P. THOMAS, ERNEST I. DOE, MAYLAND H. MORSE, RAY C. HOPKINS, JOHN T. G. NICHOLS, HARDY CROOM, JOHN T. WYCOFF, JAMES B. HAYES, LEON E. JORDAN, ROBERT J. HUNTER, VICTOR D. VICKERY, JOHN H. BISSELL, WALTER H. BURKE, NATHAN H. DANIELS, FRED H. FARNHAM, RALPH H. WILLIAMS, EDWARD T. STEEL, FREDERIC N. BUSHNELL, JOHN L. OBER, EDWIN E. S. BIRTWELL, FRANK A. STEVENS, JOSEPH POPE, HENRY L. BUNCE, JR., RUSSELL A. FOSS, WILLIAM N. PATTEN, FRED R. CHURCHILL, WARREN W. LOOMIS, ROY E. ARGER-SINGER, NATHAN CHENEY, G. L. DAIGNEAU, WILLIAM T. RODDEN, RUSSELL A. PETTINGILL, WALTER E. SKULLEY, EDWARD F. FLYNN.

It was very pleasing to have the opportunity of lunching with so many of our friends from the field.

#### BATON ROUGE, LA., SEPTEMBER 22

The Standard Oil Company is running at its capacity, and construction work is under way to increase the facilities of the plant and to increase the capacity of the pipe lines to the plant. Other industries appear to be operating at a normal rate. The beginning of the cotton season has caused the cotton gins to commence operation.

Although September is one of the months to come within the dull season of the year, the wholesale and retail business is good, and an unusually successful fall and winter is looked forward to.

The real estate market continues to be very quiet. Announcement has just been made of plans for a new seven story Masonic Temple at the corner of Third and Convention Streets. Considerable office space will be available in the building, and the cost is estimated to be in the neighborhood of \$150,000.

According to figures compiled by the Chamber of Commerce, the building permits issued for the first six months of 1922 show an increase of \$234,000 over those for the first six months of last year.

Labor continues plentiful and reasonable in price, and there is no great amount of unemployment.

MR. N. G. MEDBERY of the Division of Construction and Engineering, who is making an inspection trip to various Stone & Webster Companies in the Southeast where construction work is in progress, spent a few days in Baton Rouge during the latter part of August.

On Wednesday evening, August 30, a dinner was given at the Istrouma Hotel to all members of the office force. Mr. SMALL gave a very interesting talk in connection with the company's business.

Mr. T. L. SMALL, manager, left Baton Rouge the early part of the month for an extended trip North. On his way North he spent several days in Jacksonville and Savannah. Mr. SMALL will attend the managers' meeting in Boston which is to be held on October 9, 10, and 11.

Mr. and Mrs. E. M. LINNVILLE announce the birth of a son, Emery Maxwell, on Tuesday, September 19.

Mr. JAMES LINNEHAN, of the accounting department, is spending his vacation at home in Massachusetts.

Mrs. H. K. VUGHT, Mrs. A. K. HILL and Miss EUOENIA CARMENA are spending their vacations in the southern part of the state.

Mr. T. J. TOMENT has joined the organization as clerk in the gas department.

#### BROCKTON, MASS., SEPTEMBER 22

Most of the local shoe manufacturers are running under fairly steady production, but not as full as was anticipated. This condition is expected to improve, however, now that the shoe salesmen have started on their fall trips. Local rubber industries are apparently very active, and conditions in the wholesale and retail trade are very favorable.

Business with the company is good, considering the general condition of the shoe trade, which is reflected somewhat in our power earnings, although new business is being secured at a fairly satisfactory rate, there having been 282 additional customers taken on during the last thirty days. A steady improvement is being shown in our daily loads and output.

Continued improvement is being shown in the building trades. One local real estate firm has purchased land, and plans to erect forty new houses in the western part of the city. Building permits for the month of August totaled 173, with an estimated value of \$204,000.

At the opening of the school sessions all enrolment records were broken. A gain of 1,421 pupils over last year was shown.

Miss ANNA KENDRIGAN of the plant department has been spending a vacation at North Conway, New Hampshire.

Miss MARY DENNISON, chief clerk, has returned to her duties after a serious illness which kept her at home for about four months.

The girls in the office gave a shower for our cashier, Miss MINNIE PEARSON, who is to be married in October, and presented her with a madeira luncheon set.

Mr. Harold Edlund, a former employee, now with the Fall River Company, called at the office recently and received a warm welcome from his old friends.

Mr. WALTER A. FORBUSH, plant superintendent, with Mrs. Forbush is enjoying a week at Linnekan Lodge, Bayville, Maine.

We had as guests during the month MESSRS. J. T. G. NICHOLS, F. S. FARNHAM and BOB HUNTER of the Boston office, Mr. LANCASTER, of the Galveston Electric Company and BOB HIMEL of El Paso.

#### COLUMBUS, GA., SEPTEMBER 25

Local cotton mills are now operating at full capacity. The employment situation is better than it has been in some time. All cotton oil mills and cotton gins are operating at full capacity.

Georgia's cotton crop for 1922 will net farmers \$10,000,000 more than the bumper crop of 1914, according to recent statistics published by one of the Georgia banks. Approximately 1,000,000 bales will be produced this year, and this will be sold at an average cost of \$100 per bale. The crop in Muscogee County and nearby sections has been fairly good in spite of the boll weevil and other obstacles.

Increased activity is noticeable in all lines of business. Automobile sales for all makes of cars are increasing. Kyle Brothers, local distributors for the Studebaker car, have received five carloads of the 1923 model, and report that these are practically all sold.

Stroud Grocery Co., a large wholesale concern, has filed application for a charter. This firm will be capitalized at \$25,000, with the privilege of increasing its capital stock to \$100,000.

Tri-State Navigation Co. recently held a directors' meeting and an election of officers for the coming year. At this meeting they reported a good freight business handled during the past season, and are planning to further enlarge their activities during 1923.

Bank clearings for the month were \$2,737,000 as compared to \$2,684,000 for the previous month.

The worst of the depression seems to have been reached, and for the rest of the year it seems probable that earnings in all departments will show an upward trend. The increase in revenue of the light and power department is very noticeable this month. With the arrival of the officers for the Fort Benning school and with the return of all those who have been away for the summer, the revenue in the gas department should also increase, due to the increased send-out. An explosion at the gas plant last week entirely wrecked the compressor and exhauster house, but did not injure any of the operating machinery. Service was only interrupted two hours. Plans are now under way to repair this damage.

Operating expenses in all departments are well under the revised estimates.

The usual October moving rush is upon us, and the service department is working at top speed to take care of all requests for service.

Eighth Street from Broad to Sixth Avenue has been opened to traffic, and the improved service is causing very favorable comment.

A number of real estate deals of major importance have been concluded here during the month, the most important one being the sale of the property on Broad and Twelfth Streets, to the Third National Bank for a consideration of \$300,000. Another building on lower Broad Street, known as the Broad Street Garage and Stables, has been purchased at a price of \$52,000. Burrus Motor and Tractor Company have moved into their new salesroom. This building was constructed especially for them, and erected at a cost of \$50,000. The building of homes in all parts of the city continues with undiminished vigor.

The Central of Georgia Railway has proposed improvements for Columbus calling for a total expenditure of approximately \$1,000,000. This plan calls for the closing of the Eleventh Street underpass and the erection of two viaducts, one at Tenth Street from Seventh Avenue to the city limits, and the other at Thirteenth Street from Tenth to Fifth Avenue.

With the increased activity in cotton mills, the labor situation is materially improved. Large numbers of men are now employed by the local cotton gins and cotton oil mills.

MANAGER E. M. HARDING and MR. G. K. HUTCHINS have returned from a three weeks' conference in Boston.

MESSRS. JOE JACOBS, H. H. SCHOMBURG, M. J. FOX, R. E. PATRICK and WALTER CLARKE attended the National Electric Light Association for the Southeastern district held in Atlanta. They visited the Tugaloo development of the Georgia Railway & Power Company while away.

Columbus has been made headquarters for the Southeastern district of the American Automobile Association. Over 500 local members have been obtained to date. General Malone, assistant commandant at Fort Benning, has been elected president of the Southeastern district.

MR. H. R. WHITON, secretary to MR. WETTERER, visited us for a couple of days last week. He arrived in time to see the company baseball team play the deciding game with the Meritas Mills for the championship of the Industrial Baseball League. His arrival had the desired effect, and the company team won by a score of 1 to 0.

MR. H. C. FOSS, district manager, visited us after the explosion which occurred at the gas plant.

We regret that MR. A. M. SPENCER, foreman of the gas plant, was seriously injured in the explosion, though he is now doing very nicely.

MR. HARDING has practically completed his new home in Wildwood Circle, and is very busy moving.

#### EL PASO, TEXAS, SEPTEMBER 21

There has been no change in business conditions since last month, business being generally quiet.

The condition of the Company's business and outlook for the future is fair.

Building permits for August totaled \$250,855. The buildings were chiefly bungalows, with a number of apartment houses.

The building crafts continue fairly well employed, but due to the local railroad strike there is some unemployment among this class of labor.

MR. B. D. MURRELL, line foreman, reports a pleasant vacation spent in Hot Springs.

MR. EDMUND C. ADAMS, head of our service department, has returned from a vacation spent in Los Angeles and San Francisco.

MR. M. H. FLIEY, day dispatcher, accompanied by Mrs. Fliey, has returned from a five weeks' vacation, which was spent at Cleveland, Chicago, Buffalo, Niagara Falls and in Iowa.

MR. JOHN COX, railway inspector, and family have returned after ninety days vacation, which they spent at Amarillo and Fort Worth, Texas.

MISS A. L. CABELLO, bill clerk, has returned from her vacation, which was spent in Chihuahua, Mexico.

MR. A. D. BROWN, chief clerk, and family spent their vacation at High Rolls, New Mexico.

MR. F. B. SCURLOCK, superintendent of transportation, and family, J. C. ASHFORD, railway inspector, and wife have returned from a motor trip to Cloudcroft, New Mexico.

MR. R. O. HIMEL, assistant treasurer, has left for a business trip to the Boston office.

On Friday evening, September 1, a party was held at the car barns for the employees of the mechanical department. Boxing and wrestling were enjoyed during the early part of the evening, after which 600 pounds of ice cold watermelon, one

case of cantaloupes and 50 gallons of lemonade were enjoyed. After the eats some very interesting talks were made by Messrs. DIXON, THORNE, SCURLOCK and LAWLESS.

EVERETT, WASH., SEPTEMBER 22

The demand for lumber continues satisfactory. Shingles, however, are on the decline or are selling so low that it hardly pays to manufacture them. Aside from the shingle industry, logging and other lumber industries are in fairly good shape, and as the railroads will soon be able to furnish sufficient equipment we believe that the industry will be reasonably prosperous for the rest of the year.

Local, wholesale and retail merchants report trade very satisfactory during the month.

Interurban traffic, while not nearly so heavy as during the month of August, is quite satisfactory both on the southern division electric cars and on the stage line operated between Everett and Mr. Vernon.

Receipts of the city lines for the first fifteen days of September show a decrease of 4 per cent. When allowance has been made for the loss of the Snohomish Line earnings, they show an increase of 1.6 per cent.

Construction is progressing satisfactorily on the Home Acres, Lake Stevens and Marysville extensions and also on the Mukilteo extension.

On September 21, sale of the Granite Falls Electric Company to the Puget Sound Power & Light Company, Everett Division, was completed, deed signed and payment made for the plant. We take over this plant at once.

Considerable residence building is continuing during the favorable weather.

FORT MADISON, IA., SEPTEMBER 25

The American Fork & Hoe Company are gradually increasing their working force, and expect to be operating their plant to full capacity before the first of the year. They report that business is better than it was at any time for the past four or five years. The Perfection Tire and Rubber Company have started to curtail operations, which is customary in the tire business at this season of the year. The past summer has been the most active since they started operating, and their average daily output has been close to 1,700 tires per day. The W. A. Sheaffer Pen Company are enjoying a steady increase in both the pencil and pen departments.

Most of the other local industries are operating on practically the same basis as during the past few months.

The Atchison, Topeka & Santa Fe Railroad claim that they have a full quota of men in the local shops. The Santa Fe claim they are handling more freight than any time in their history.

Retail merchants claim that business has not been up to the standard during the past three months.

For the past month we show a very substantial increase over the corresponding month last year. The net gain in new customers continues to be approximately 35 per month, and from present indications we expect an even greater gain for the last three months of this year.

Real estate transfers have been unusually active during the past month. The number of new homes under construction is constantly on the increase, and the house shortage continues to be a very serious problem.

On account of the very active building program there is very little idle labor in this city.

Work on the new high school building is progressing very rapidly, and nearly all foundations are in place. The new Methodist Episcopal Church is well under way, and promises to be a very valuable addition to the church buildings of this city.

The grape crop in this section is an unusually heavy one.

Mr. and Mrs. A. S. NICHOLS visited in Fort Madison on Thursday, September 21.

Mr. HANS VITTINGHOFF, of the Boston office, also called on us that day.

Mr. WILBER E. DAVIS, assistant treasurer, is on his vacation at Wyconda, Missouri, with his family.

#### **GALVESTON, TEXAS, SEPTEMBER 22**

Exports from Galveston for the month of August totaled approximately 205,477 tons, valued at \$17,442,659, while imports during the same period were approximately 123,922 tons, valued at \$1,660,512. Both exports and imports show a slight gain over the figures for July.

Grain loaded at Galveston for export during the month of August reached a total of 4,453,012 bushels, reflecting an increase of 3,037,012 bushels over the previous month.

There were 561,000 barrels of crude oil imported during August. Outbound shipments included 1,007,500 gallons of lubricating oil and 1,787,957 gallons of fuel oil.

Estimates made by local steamship men show that between ten and twelve million pounds of flour will be exported from Galveston during the present month. This will set the highest record ever attained here for shipments of this commodity.

Custom collections at the Galveston office for the month of August were \$508,683 and marks the highest amount ever collected during one month.

Announcement was made that beginning with September, the shipping board will increase service from Galveston to Barcelona from one to two sailings monthly.

Efforts are being continued to increase the volume of coffee imports through Galveston and to make this gateway a coffee center of importance. Practically all of the roasters in the Texas cities have pledged their support, as well as numbers of roasters in Oklahoma, Kansas and Colorado, and several big shipments are now en route to Galveston for a large New York coffee importer.

The United States Shipping Board is inaugurating direct coffee transportation shipments between Brazil and Galveston this month.

Indications point to a cotton crop of approximately 10,500,000 bales, which will leave a margin of about 4,000,000 bales for export. Promises of a good crop made a month or two ago did not materialize.

According to information given by the Galveston Merchants' Association, the wholesale and retail business in Galveston is no worse than it was in September of last year, and this city compares favorably with the other cities in Texas. Merchants report collections to be a little slower during August, 1922, than they were during the same month last year.

About 1,000 visiting members of the Kiwanis Clubs of Texas and Oklahoma were in Galveston, September 4 and 5, for the fifth annual convention of this organization. One hundred and seventy-five teachers were in attendance at the joint teachers' institute for Galveston and Brazoria counties, September 5-9.

Several thousand visitors were in this city on Labor Day.

Three hundred and six building permits were issued during the month of August, with an approximate valuation of \$102,049.

A contract has been let for an addition to the warehouse of the Moody Compress, which will provide space for 20,000 more bales of cotton, and will make the capacity of the warehouse of this company 150,000 bales. The cost will be about \$50,000.

The Oleander Compress and Warehouse Company is providing additional facilities at their plant by the erection of a cotton shed and warehouse, the estimated expenditure is \$65,000.

The Galveston Gas Company is adding a new purifier to their plant at a cost of \$15,000, which will increase the capacity from 60,000 to 100,000 cubic feet per hour.

The United States lighthouse service is constructing a 200-foot wharf with a storage house thereon on Pelican Spit. This wharf will replace the one formerly owned by the service, which was located at Fort San Jacinto and which was destroyed in the storm of 1915.

Employees in the shops of the Gulf, Colorado & Santa Fe Railway have formed a new and independent union and officials of this company have declared that before returning to their employ the strikers must agree to abide by the agreement reached between the company and the new union. Similar agreements are being considered by other roads in this section.

On September 15 the heaviest rainfall during the present year was recorded with a total of 6.18 inches falling in nine hours and fifteen minutes.

Mr. R. B. LANCASTER, assistant treasurer, left Galveston on September 6 for his first visit to the Boston office. He will visit points in Illinois and Delaware enroute.

MESSRS. LUKE C. BRADLEY, district manager, and WM. E. TUCKER visited Galveston during September.

MESSRS. W. J. SMITH, BOB MILLER and SAM WINE of the Northern Texas Traction Company, Fort Worth, were Galveston visitors during the month.

MISS LUCILE AMUNDSEN, cashier, is spending a two weeks' vacation in Houston.

MR. R. E. BOWEN, purchasing agent, has returned from a vacation spent in Alabama, Tennessee and Fort Worth.

MR. D. A. CALK, meter tester, was married to Miss ELFREDA SASS on Sept. 19.

#### HALIFAX, N. S., SEPTEMBER 23

The general impression among business men is that there has been an improvement in trade during the month.

A small amount of street paving was done during the month while the company laid new track and paving on Cunard Street for a distance of about 700 feet.

The Unemployment Office report a slight increase of unemployment due to the finishing up of street work by the city.

Gas department output shows an increase of 9 per cent and power station output an increase of 8 per cent, over last year.

On Saturday, September 16, the city was visited by a very heavy lightning and rain storm doing some damage throughout the district. The lightning struck the transmission lines of the Nova Scotia Power Commission, cutting off the supply of current to the city, which necessitated the company having to put their steam plant in operation for twenty-four hours.

MR. M. C. SMITH, the superintendent of the light and power department, is on his vacation, part of which will be spent in Maine.

MR. C. F. STROER, our assistant treasurer, is now on a visit to Boston going over accounting matters of this company.

MR. J. H. MANNING, of the engineering department, was a recent visitor in Halifax.

**HAVERHILL, MASS., SEPTEMBER 26**

The Chamber of Commerce reports that practically all shoe workers are employed on full time, and although the newspapers say that there is a slight lull at this present time, it is momentary and that the fall business will be very good.

The merchants are reporting a good business for this season of the year and the increase in factory work has been reflected somewhat in the retail stores. The L. R. Steel interests, which now have a store here, have signified their intentions of enlarging.

The demand for gas has increased during September so that our send-out for the month up to September 23 is 3.7 per cent greater than the corresponding period last year. The coal snaps which have visited us recently have stimulated sales of room heaters and we have excellent prospects of securing some good industrial load. At the present time our largest bakery is equipping one of its ovens for the use of gas and, if successful, we may convert their entire plant.

Building activities are about normal and represent mostly modest dwellings and repair work.

The controversy between the Shoe Workers' Protective Union and the Boot and Shoe Workers' Union which involves the J. H. Winchell Company has not been settled. The Winchell Company is now operating about three hundred operatives furnished by the Boot and Shoe Workers' Union, affiliated with the A. F. of L., but the rival union is very persistent in picketing and a strong police guard is on duty.

MR. T. P. WALKER attended the managers' meeting held in Pawtucket by the Southern New England managers.

MR. FRANK CRONIN, our storekeeper, married Miss Bernice Marcotte, a former employee of the company, on September 6. The employees of the company presented the newly married couple with a complete set of table silver and many attended the reception which followed the wedding. Mr. and Mrs. CRONIN spent their honeymoon in Canada.

MR. and MRS. HAROLD SCHELL arrived in Haverhill on Saturday, September 16, and MR. SCHELL has taken over his duties as general superintendent.

MR. HAROLD SCHELL, MR. H. P. DAYTON, MR. W. R. BELL and MR. WILLIAM BELL attended the annual meeting of the Massachusetts Electric and Gas Association at the Tedesco Country Club, Swampscott, Mass.

MR. T. P. WALKER, Mayor Flanders, Alderman Martin, Stephen W. Howe, superintendent of street lighting, Alderman Manning and WILLIAM BELL, our distribution superintendent, visited the Lowell Gas Light Company on Friday, September 15, in order to examine their system of street lighting.

MR. KENNETH HINDS, employed in our sales department, had the misfortune to break his leg while stepping from a outbound moving train in the North Station on September 9. He was removed to the Massachusetts General Hospital where he will be confined until about the middle of October.

MR. TOM P. WALKER, vice-president of the Haverhill Rotary Club, attended the fall conclave of New England Rotary Clubs held at the "Griswold" in Groton, near New London, Conn.

The Haverhill Gas Club started its winter season with a meeting in Mitchell's



Hall on Thursday evening, September 14. The following officers were elected for the ensuing year:—president, JOHN LEITH; vice-president, CECILIA HOLLOWAY; secretary, FLORENCE SARGENT and treasurer, ELLIOTT PEABODY. The feature of the meeting was a talk by MR. N. H. DANIELS, of the Statistical Department, on fire protection. Following MR. DANIELS' address, dancing and refreshments were enjoyed.

MR. W. R. BELL and MR. CLYDE DAVIS attended the sales managers' conference held in North Abington during September.

#### HOUGHTON, MICH., SEPTEMBER 19

Two of the local mines have followed the lead of the western copper companies and have announced an increase in wages of 15 per cent. This action is expected to be followed by other mines in the district, and it will probably result in the return of some of the miners who were attracted to the automobile centers last spring.

There has been little change in the condition of local wholesale and retail business during the past month, but the increase in wages just announced should be reflected in local business in due course.

Business of the lighting company continues to hold up very well, and with the approach of winter, business of the traction company should show a considerable improvement.

There is still a scarcity of labor in the mining industry, particularly in regard to trammers.

MR. R. P. SCHUMAKER, purchasing agent of the lighting company, returned during the latter part of August from a vacation trip spent at Escanaba, Michigan, and Milwaukee, Wisconsin.

MISS CATHERINE CHIOTTI, for several years an employee in the Houghton office accounting department, has resigned her position to locate in Chicago. Miss CHIOTTI was tendered a farewell dancing party at Electric Park on the evening of Monday, August 28, and was also presented with a traveling bag by the office force.

MR. W. B. LATIMER, chief engineer, and family left Houghton on August 31 for a vacation at Savannah, Georgia.

MR. W. J. EDWARDS, lighting company payroll clerk, has returned from spending a two weeks' vacation at Detroit.

MR. EARL L. TROWBRIDGE, assistant chief clerk, spent his vacation at Chicago and Detroit, and also attended the state convention of the American Legion at Ann Arbor on September 5 and 6.

MR. W. C. SHIELDS, of the Paducah Electric Company, arrived in Houghton on September 13 for a visit of the Houghton plant.

MR. C. J. HARVIN and MR. B. S. LUTHER have completed their work of calibrating the meters of the Houghton properties and left on September 11 for Pawtucket, Rhode Island.

The following were in Houghton during the month of September: MR. DAVID DALY, district manager; MR. C. W. KELLOGG, of the Boston office; MR. E. L. MILLIKEN; manager of the Blackstone Valley Gas & Electric Company at Woonsocket, Rhode Island; and MR. B. E. VAN VLIET and MR. W. W. WALTER, auditors.

Announcement has been made by the War Department that the sum of \$125,500 has been made available for repairs, improvements and maintenance of the Keweenaw waterway by allotment of funds appropriated by Congress for river and harbor improvements during the year 1923. Important work at the Portage Lake Canal is included among the improvements for which the \$125,500 will be expended.

Copper shipments from Portage Lake during the month of August totaled 5,404 tons.

The Lake Superior Mining Institute held its twenty-second annual meeting in Houghton on August 28 and 29.

MR. GARVIN P. MITCHELL, ledger clerk, is spending two weeks' vacation at Chicago and points in Indiana.

MR. F. G. PHILO, of the Betterment Division, arrived in Houghton on September 13, in connection with work for the Calumet & Hecla Mining Company.

MR. P. W. WILDER, superintendent of distribution of the Southern division of the lighting company, attended committee meetings of the safety overhead system and electrical apparatus of the technical section of the Great Lakes division of the N. E. L. A., on September 19, 20 and 21, at Milwaukee, Wisconsin. On the 22nd, at Jackson, Michigan, MR. WILDER attended a meeting of the committee on meters and wiring of the Michigan Electric Light Association, which was held to consider the commission's rules on standards of service, preparatory to a hearing in Lansing for October 9.

MISS ENID POLKINGHORNE, of the Calumet office, left on August 14 on the steamer *Octorara* for a vacation trip to Detroit.

MISS BERTIE LORINE DESROCHERS, service clerk at the Houghton office, was married to MR. EDWARD LOUIS MATTE, of Hancock, Michigan, at St. Joseph's parsonage on September 16. After a brief honeymoon, MR. and MRS. MATTE will make their home in Houghton.

#### HOUSTON, TEX., SEPTEMBER 26

Imports through the Port of Houston during the month of August totaled 7,114 tons, valued at \$259,156. Exports for same period amounted to 24,241 tons valued at \$3,963,000. Wheat exports from Texas City during August amounted to 1,063,000 bushels.

The bank deposits as of September 15, were \$104,908,102, an increase of \$16,229,481 over the bank call of June 30.

The Houston Electric Company is now involved in a rate litigation with the City Council. On September 21, the Houston Electric Company filed application with the City Council, asking for an increase in fare from 7 to 9 cents and half fare from  $3\frac{1}{2}$  to  $4\frac{1}{2}$  cents; also that tokens now sold at reduced fare be eliminated. At the present date the City Council has not acted on this application, and we are bringing the appraisal of the company's property of 1918 to date so that we may carry the fight for increased fares to the Federal Court if necessary. This increased fare was asked because the City Council has not eliminated jitney competition which makes it impossible for us to obtain a bare return on our property value.

The State National Bank is erecting a 12 story bank and office building at 412 Main Street. This building will cost approximately \$500,000.

Promoters of the new interurban down the Ship Channel to Bay Shore have filed a bond of \$7,500 guaranteeing that the line will be in operation by the spring of 1923.

Application has been filed for building permit for the erection of a \$30,000 store building at Austin Street and McKinney Avenue. The building will be two stories high.

MR. R. G. CARROLL, Galveston, visited the office during the month.

MESSERS. WOOD and BENNETT returned from an overland trip to Colorado August 30. They both report a most enjoyable trip.

Among the visitors from the Fort Worth office were: MR. G. H. CLIFFORD, manager; MR. BERRY, general superintendent; MR. TABER, superintendent construction of Stone & Webster of Fort Worth; MR. D. V. THOMAS, MR. J. B. BOWEN and H. M. ROBINSON. These gentlemen are helping us in the preparation of data to be presented in our rate litigation case.

On September 21, the Houston Electric Company filed application with the City Council asking that fares be increased from seven to nine cents.

MR. A. E. HATLEY and E. L. ROBINSON visited our offices during the month.

MR. G. S. BRUSH sailed from Galveston on September 16, for New York, where he will spend his vacation.

MR. R. C. ALLEN, chief inspector, Northern Texas Traction Company, has been transferred to the Houston Electric Company in the same capacity.

MR. C. A. BRANN, superintendent of traffic, is confined to the hospital at the present time.

MR. W. E. TUCKER, of Boston, is in our city on company business.

MISS GRACE JOINES, of the transportation department, has just returned from a vacation spent in California.

#### JACKSONVILLE, FLA., SEPTEMBER 22

Agricultural crops in general are reported to be good for the season. The citrus fruit shows an improvement in condition over a month ago. Prospects through the central highland belt are excellent.

During the month of August, 291 building permits were issued with a total value of \$719,494.00. Contract was let for the erection of the \$100,000 structure for the new Timuquana Country Club.

August, while not by any means the peak month in shipping at this port, which has always done better during the winter months, proved very good to Jacksonville, in that thirteen more arrivals and departures were handled than for the same period in 1921. The total this year is 146, aggregating a tonnage of 303,391, according to figures of the port statistician who computes them as 121 "coastwise" and 25 "foreign." Exports for the month were valued at \$671,600, while imports were valued at \$482,000.

The managers of the Southeastern district were in Jacksonville during the month and while here, accompanied by the city commissioners, inspected the municipal power plant.

MR. E. J. TRIAY, receiver of the company, is away on his vacation. Before returning, MR. TRIAY will attend the managers' convention in Boston.

MR. POWELL and MR. FRANCIS, of the Boston office, arrived in the city August 23, for the purpose of auditing the books of the company.

MR. MEDBURY, of the Engineering Division, was in the city for a few days, in connection with the installation of the oil burning machinery in our new power station.

MR. BARRETT, of the Engineering Division, is in Jacksonville, attending to the installation of the oil burning machinery at our new power station. The installation will be finished and in operation by September 23 it is expected.

MR. J. N. WHITFIELD has just returned from a vacation in the North.

MISS KATHERINE THOMSON was away during the month on her vacation.

MR. C. E. BOSTWICK, general superintendent, was away during the month on his vacation, which he spent at Daytona Beach, with his family.

Bank clearings during the five weeks of August amounted to \$53,362,000.

Postal receipts showed a gain of 13.87 per cent over the corresponding month of 1921. The postal receipts amounted to \$63,565.82, as compared with \$55,819.45 of 1921.

KEOKUK, IA., SEPTEMBER 25

*Keokuk Electric Company*

During the past month nearly all of the local industries have operated at normal capacity.

The Gas Tank Recharging Company, who manufacture carbide for miners' use, resumed operations September 11, and are now going at full capacity. The carbide department of the United Lead Company is also shipping material into the mining districts.

The Standard Four Tire Company report a larger volume of business during September than they had in August or during the corresponding period of last year.

The Huiskamp Brothers Company, shoe manufacturers, advise that their business is about normal for this time of the year. They are short of skilled labor, and are advertising in Chicago, Minneapolis and other cities for men.

The gross tonnage of freight handled in and out of Keokuk will show a substantial increase over the previous month.

Our wholesale grocers report their business to be equal to September of last year. A large volume of business was done in fruit jars, sugar and other materials used in putting up the abundant fruit crop in this section of the country. One concern reports to have sold twenty-six cars of fruit jars.

September has shown no marked improvement in retail business and our merchants advise that fall trade is not opening up as brisk as expected.

From all indications, our gross income figures for September will show a substantial increase over August. Our operating expenses should be approximately as estimated. Our gas send-out for the first three weeks of September shows an increase of 6.8 per cent over August and 17.4 per cent over the same period of last year.

With exception of some remodeling work and the completion of several residences started during the summer, building activities seem to be rather quiet. During the past month seven building permits have been issued.

This vicinity is particularly fortunate in having very little labor trouble.

September 6, HAROLD W. SCHELL, formerly gas superintendent, and CHARLOTTE LOUISE STERNE were married at the home of the bride in Keokuk, Ia. MR. and MRS. SCHELL left immediately on their honeymoon enroute to Haverhill, Mass., where MR. SCHELL will assume the duties of general superintendent of the Haverhill Gas Light Company. Preceding the wedding, many enjoyable affairs were given in honor of this young couple, of especial interest among which was a buffet supper at the home of MR. DAVID DALY. This was a delightful affair attended by the parents of both the young people and members of their bridal party. On September 1, the employees of the Keokuk Electric Company tendered them a dinner at Warsaw, Illinois, where MR. J. L. ALEXANDER, manager, acting as spokesman, presented them a handsome gift.

Sales Manager WILLIAM H. McINNIS was married at Reno, Nevada, on September 20, to MISS MYRTLE CAMERON, cashier of the Truckee River General Electric Company. After a tour through the West, MR. and MRS. McINNIS will come to Keokuk, where a royal welcome awaits them.

Miss INEZ SEIFERT, railway clerk, resigned her position, effective September 15. Advance information is to the effect that this popular young lady is soon to become the bride of a former employee of this company, now in the employ of the Fort Madison Electric Company as superintendent of light and power.

MR. B. P. JENKINS, gas superintendent, announces the birth of a son, August 30.

MR. G. W. CARLSON, superintendent of light and power, announces the birth of a daughter on September 6.

MR. HANS VITTINGHOFF, gas engineer, and MR. A. S. NICHOLS, manager of the Paducah Electric Company, were in Keokuk this month on business.

MR. CRAWFORD FLETCHER, office clerk, has taken up work in the meter department. His position has been filled by MR. CARL BECKMAN.

On the evening of September 28, the meter department sponsored a weiner roast along the Des Moines River. The crowd was conveyed to the picnic spot by means of an old-fashioned hay rack. Gathered around a bonfire all enjoyed the singing of familiar songs under the able direction of MR. J. L. ALEXANDER, manager. The outing was such a success that no doubt this department will be asked to act as host again.

#### *Mississippi River Power Company*

MR. C. A. SEARS, manager, attended meetings of the Electrical Apparatus and Hydraulic Power Committee of the National Electric Light Association held at Milwaukee, Wis., September 20-21.

MR. E. C. HART, assistant treasurer, returned to Keokuk, September 22, from a business trip to the Boston office.

MR. N. T. WILCOX, sales manager, visited Paducah, Ky., on business, September 18-20.

Plans are being made by the High Tension Club for a week-end outing on Lake Keokuk, the last of this month.

#### **KEY WEST, FLA., SEPTEMBER 25**

Several of the large cigar factories have increased their forces during the past month, and this industry is probably doing more business at the present time than it has at any time during the past 18 months.

Activities in the sponge and fishing industries continue dull due to unsettled weather conditions.

The wholesale and retail business people, with the exception of dry goods and clothing merchants report no noticeable increase in their business during the past month.

The condition of the company's business at the present time is more encouraging than it has been for some time past. Due to increased activities in the cigar industry, our railway receipts are gradually increasing.

The lighting business is also making a satisfactory showing as recent records show that we are now gradually gaining customers. Also our A. C. distributed indicates that lighting and power receipts for the month of September will make a very satisfactory showing.

There have been a great many building permits issued during the month for additions and repairs to buildings, but very few permits issued for new buildings.

At the present time there is very little idle labor about the city. There is a shortage of cigar makers due to so many of this class of workmen leaving the city during the dull period in this industry. A recent drive by the city to get sidewalks laid on

all paved streets has resulted in a great many common laborers finding employment in this work.

MR. J. H. MONTICINO, commercial agent, who has been ill and confined to his home for several weeks, is now getting along nicely and in all probability will be back at the office within the next few days.

MR. B. L. GROOMS, manager, spent several days visiting in Savannah and Jacksonville during the month.

MR. HARRY GREGORY, stock clerk, who has been spending his vacation in Miami, Fla., returned to the city September 21.

MESSRS. P. L. POWELL and W. J. FRANCIS, auditors, are now engaged in auditing the books and records of the company.

Work on the new curve, which the company is installing at the intersection of the County Road and White Street, is progressing in good shape.

Two series of baseball were played in Key West during the past few weeks, one between Homestead and Key West and the other between Fort Pierce and Key West. Large crowds attended the games and witnessed some of the best baseball that has been played here for some time.

#### LOWELL, MASS., SEPTEMBER 27

Although the strike of textile operatives is declared as still in effect, reports from the agents of the mills show factories are well supplied with all help needed, and nearly all mills show increasing activity.

Business in the stores shows seasonal stimulus. The Bon Marche Dry Goods Company is remodeling the interior of its building, enlarging departments and adding improvements to make the store the most modern and best equipped in this city.

The gross earnings of the company for twelve (12) months ending August 31, 1922, show an increase of about 6 per cent over the previous twelve (12) months with indications for continued improvement. The load on the power station showed a maximum demand during August of 10,100 kilowatts which is an increase of 1,500 kilowatts over the August, 1921, maximum, and an increase over last month of 400 kilowatts.

The kilowatt hour output for August, this year, was 3,132,640 showing a gain over the same month in 1921 of 633,381 kilowatt hours. September demands indicate further increases in load and daily output.

Appliance sales for the past month show a slight increase over August, 1921, with indications of equally satisfactory results for September.

The number of building permits issued in August showed a small increase over the previous month, and an increase of 54 over August, 1921.

The new high school and memorial building, which have been under construction for some time, are now completed and in use. The high school was opened at the beginning of the school year on September 11, and the auditorium was dedicated September 21.

Real estate transfers for August were 1,150 against 991 for July.

The wedding of Miss BESSIE HALE, assistant in the manager's office, and Mr. CALEB ROGERS, cashier, took place on Saturday, September 16, at the home of the bride. Many of the company employees were guests at the reception which followed the ceremony. Mr. and Mrs. ROGERS spent their honeymoon in the White Mountains.

The marriage of Mr. ARTHUR BERNIER, of the sales department, to Miss Aurora

Trudeau took place on the 22nd of August. Mr. and Mrs. BERNIER spent their honeymoon at Hampton Beach.

Mr. FREDERICK BRITTON, of the construction department, was married on September 27 to Miss Esther Fondy.

The manager, Mr. HUNNEWELL, is spending his vacation at the Alpine Hotel, North Woodstock, New Hampshire.

Miss GLADYS DODGE has just returned from a very delightful vacation spent in New York City.

Miss ELEANOR SUTTON has returned from a vacation at Long Island, Friendship, Maine.

Miss EVELYN LEE, of the accounting department, has returned from a vacation spent in Philadelphia and New York.

A daughter was born to Mr. and Mrs. GEORGE RENNARD this month. Mr. RENNARD is an underground man in the construction department.

The new auditorium erected as a memorial to the soldiers and sailors from Lowell who served in the Civil, Spanish, and World Wars, was dedicated, September 21, with appropriate exercises. Vice-President Coolidge, Governor Cox, Congressman Rogers, and General Edwards were the principle speakers. Mr. PERCY J. WILSON, power sales engineer, served as Chief Marshal, and many of the ex-service men of the company acted as ushers.

The twenty-seven new white way lights on the East Merrimack Street extension were turned on September 19. Five lights of the same type were placed in the auditorium grounds to appropriately light up the new building.

#### MIDDLETOWN, CONN., SEPTEMBER 26

Increased orders at the Noiseless Typewriter Company have made it necessary to increase their force from three hundred to five hundred men, and they have recently increased their working hours from forty-eight to fifty a week. Bornstein & Sons, silk manufacturers, with a plant at Patterson, N. J., have leased space in the Elam-Strong Paper Company building and are starting operations in the near future with approximately one hundred employees and a weekly payroll of \$4,000.

During the past month we have installed meters in the homes of 53 new customers. The outlook for the future is very bright.

The Middletown National Bank is constructing an extensive addition to its present building on Main Street.

There are practically no unemployed in the city.

MESSRS. BIRD, TRULL, KEBBE and CURRAN were visitors in Middletown during the month.

Mr. PACKARD was a visitor in New London during the month.

Mr. H. A. HIPPLER, general superintendent, and his family are comfortably located in their new home.

Mr. WEATHERBEE attended the New England sales managers' meeting at North Abington, Mass., September 13 and 14.

"DREWEY" LOHNEISS announces the birth of a daughter, August 31.

STEVE ZULTANSKI, the line inspector, has returned from his vacation.

#### NEW LONDON, CONN., SEPTEMBER 25

Business in New London continues to be active. At the shipyard of the New London Ship & Engine Company the increased activity continues. Both the New London Ship & Engine Company and the Babcock Printing Press Company—two

of the larger industrial plants—report increasing orders. At the State Pier an increasing number of ships bringing lumber from the west coast and fruit from South America and the West Indies are arriving.

In general there is an encouraging and healthful tone to the industrial and economic reaction.

The wholesale and retail merchants report a natural increase in sales and heavy buying by the 10,000 summer visitors who spend two months in and about New London.

The business of The Connecticut Power Company shows a healthy increase over last year due to an increased number of customers, the greater industrial activity, and in general, a greater use of electricity by residential consumers.

The building trades have been very active. During the first 25 days of September, 27 building permits were issued, covering the erection of many small garages, 15 dwelling houses and four buildings for commercial purposes.

The Edward Bloom Silk Company, one of the ten new industries which the Chamber of Commerce has brought to town in the past three years, has just completed the erection of its second mill building and is now commencing work on the third.

Labor conditions are excellent in New London. There is almost no unemployment and there are no strikes. Several of the industrial plants are increasing their output and consequently hiring more men.

The weather during the past month has been most auspicious to the success of New London's major business. As a summer resort New London excels and during the past summer there have been five conventions. The largest gathering of this sort was the Fall Conclave of the thirtieth and thirty-first districts of Rotary. Over 1,400 people attended.

The annual picnic was held on Brown's Farm at Gales Ferry. We are very glad to extend our hearty congratulations to the committee and feel that they could not have picked out a better place, a better day or given us a better time. There were over 200 employees from the New London and Middletown Divisions with their wives and children. We were favored by having with us Mr. M. L. SPERRY, our district manager from Boston, and Mr. A. D. COLVIN, general manager of the Hartford Electric Light Company. Mr. LYLES also came down from Canaan with his son.

Results of the athletic events were as follows:

100 yard dash for men won by C. HAMLEN, New London;

75 yard dash for girls, won by Miss MARY EGAN, New London;

440 yard relay race for men, won by Middletown—4 men;

Sack race for men, won by J. KERR, New London;

Three leg race for men, won by FAHEY and GILLETTE, New London;

Potato race for girls, won by Mrs. FAHEY, New London;

Standing broad jump, won by J. BAIRD, New London;

High jump, won by R. CURRAN, New London;

Ball throwing contest for girls, won by Miss CAMARATTA, Middletown;

Shotput contest, won by J. MORGAN, New London;

Nail driving contest for girls, won by Miss E. KEENEY, New London;

Tug of war, 7 men, won by New London;

Pole climbing contest, won by F. SANDSTRUM, Middletown;

Ball game—New London and Middletown—4 innings—won by New London, 6 to 2.

At noon, Chef Leary of the Thames Club, served us a very good clam chowder.



GURDIE WILLIAMS took the prize for eating eight plates. In the evening, the same fellow served an especially good clam bake with all the fixings.

There was dancing in the evening at Riverbend Casino.

During the last month we have played baseball twice with Hartford. We blush when we tell the results. The first game was 5 to 3 in favor of New London and the second was 13 to 11 in favor of New London.

MR. TOM P. WALKER, manager of Haverhill Gas Light Company, was a visitor in New London during the month. From all reports Rotarian Tom had an enjoyable time at the Fall Conclave.

The third picnic of the season for the CoPoCo Club was held Saturday afternoon, September 23, 1922. This time it was an informal affair arranged and carried out by some of the boys at the plant. After the company picnic in August the boys decided that they could stand another, and somebody bet FREEMAN KENERSON that he couldn't run a clam bake—and then the affair began. About 100 souls congregated at Riverside Park and proceeded to make merry. Then about the time that everyone was weakening from too much basket ball, baseball or kidding, the clam bake gang "KEN" announced that the "bake" was ready to open. An hour later the battle was over and a late comer would have fared very poorly.

#### PADUCAH, KY., SEPTEMBER 23

Joyce-Watkins Company and Arrow Transportation interests have recently purchased a deep water site near the Island Creek bridge for the erection of a new barge plant and possibly marine ways.

The Gulf Refining Company recently purchased property at Third and Elizabeth Streets and will erect several large storage tanks, filling station and new office building at total expense of about \$50,000.

The International Shoe Company established a new record for production of shoes during this month, reaching a daily production of 4,300 pairs. They are now employing a total of 655 persons, of which 175 are women and girls. New machinery is being added daily and their power requirements have now reached an average demand of 300 kilowatts.

A new record was established during the month by the American Cigar Company when they reached a total daily production of 61,000 cigars. They are employing approximately 180 girls at a weekly wage of between twenty and thirty dollars.

The new building for the Claussner Hosiery Mill is being remodeled and it is estimated that this plant will be in operation the middle of November.

Local wholesale dealers report unusually good fall sales, many of them obtaining additional floor space to care for increased volume of business. Local retail merchants are now arranging their fall and winter stocks and state that the indications for fall purchasing are better than for several years past. During the week of September 18 the retail merchants conducted a fall style show, with very attractive windows and general interior decorations.

The railway company inaugurated the \$1.00 weekly, transferable, unlimited ride pass on August 28. The gross earnings for the first week in September were 10 per cent and the second week 16 per cent over the corresponding week last year. The sale of the passes for the fourth week exceeded any previous week.

There have been approximately 300 new houses constructed in Paducah so far this year, at an expenditure of approximately \$750,000, and it is estimated that this figure will reach \$1,000,000 by the end of the year. The Elks' Lodge recently

purchased property at Sixth and Jefferson Streets and will erect early next year a modern building at a cost of approximately \$200,000.

The construction of the new sewer system is going forward rapidly and this is giving employment to a large force of men.

Plans have all been completed for the construction of dam No. 52 to be located on the Ohio River, approximately three miles from Paducah. Actual construction will begin in the spring of 1923 and will require from three to four years to complete. The erection of this dam will establish a nine foot channel on the Ohio from Pittsburg to New Orleans.

It is estimated that approximately 50 per cent of this year's tobacco crop has been cut and from all indications it will exceed last year's crop.

Paducah schools opened this fall with a record enrolment of 3,865 pupils.

The city recently let contracts for the resurfacing of North Eighth, Ninth and Monroe Streets and work on the new sewer project is going forward rapidly.

The Illinois Central Railroad recently purchased a one-third interest in the Paducah & Illinois Railroad, which controls the bridge crossing the Ohio River at Metropolis, Ill. They contemplate making some necessary repairs to the bridge in order to install double track.

Local lumber interests report that the demand for building material still exceeds current production and estimate that this condition will exist for the balance of this year.

MR. A. S. NICHOLS, manager, spent several days in Keokuk, Iowa, during the latter part of the month.

MR. N. T. WILCOX, of the Mississippi River Power Company, visited these companies during the month.

MR. W. C. SHIELDS, chief engineer, is visiting the properties of the Houghton County Electric Light Company, Houghton, Mich.

MR. and MRS. J. EDWARD TROMBLA announce the birth of a daughter, Janice, on September 6.

The Employees' Relief Association recently held their annual election of officers, the following men being chosen: president, MR. E. R. BOATMAN; vice-president, MR. R. L. BRYAN; secretary, MR. J. W. SHEPHERD; treasurer, MR. L. V. SMITH.

A complete radio receiving set has been purchased by the employees of the Railway Company and has been set up in the trainmen's room at the car barn.

Employees of the Electric Company went on a camping trip to Metropolis Lakes, Illinois, over Labor Day.

The annual picnic and field day was held at Wallace Park on August 31 with an attendance that exceeded all previous records. The feature event of the day was a ball game between the Electric and Railway Companies, the former easily winning by the score of 26 to 10. A tug-of-war was also won by the Electric Company. Pie-eating, apple-bobbing and cracker-eating contests followed and a sack race, a three-legged race and a fifty-yard dash closed the athletic program. After the various prizes were awarded, a basket supper was spread. At eight o'clock the entire company repaired to the club house where dancing was enjoyed until twelve.

PAWTUCKET, R. I., SEPTEMBER 25

*Pawtucket Gas Company*

Business in general improved materially in September, and with the textile strike practically settled, a very much brighter outlook is entertained by manu-

facturers and merchants. The strike has been in force since February, and was won by the strikers. The situation is not altogether cleared up, owing to the demand on the part of the labor leaders, on the mills that have been running, for a restoration of former wages. The number of hours per week is also being discussed.

The cotton goods market has improved considerably, and the silk people report a very much healthier condition. Quite a number of the mills are considering running night shifts now that the strike is ended, so there is every prospect of the next two or three months being very active ones on the part of the manufacturers.

The workers in iron and steel report a very marked improvement over August, and anticipate heavy orders now that the strike is settled.

The retail merchants report a notable improvement in the month of September, and failures are very few.

There was a marked increase in the amount of gas manufactured, and on several days the largest send-out in the history of the company was noted.

The real estate market is very active, and the building trade is excellent.

With the settlement of the strike labor is well employed, and every indication points to good times as far as labor is concerned for some time to come.

#### PENSACOLA, FLA., SEPTEMBER 25

The Newport Company, manufacturing turpentine and rosin, is finding a ready market for all of its products, and is working a full force 24 hours a day. The large fertilizer plant of the American Agricultural Chemical Co. resumed operation on September 7, working half of their plant. About October 1, they expect to commence full operation in all departments.

Fort Barrancas will seriously feel the cut of the coast defense forces under the recently passed army appropriation bill. This post which, previous to the war, carried from 600 to 800 men, was cut down immediately after the war to about 300 men, and is now being further reduced to 125, this being sufficient men to keep the post from deteriorating too rapidly.

All lumber mills in this vicinity are working almost full forces and are finding a ready market for their output. Lumber exports through this port have almost reached the point where they were up to the year 1914.

There is no noticeable change of any kind in the condition of the business in the wholesale and retail district during the past month. Employment conditions in the country and in the city are such as to make business for the retail district in the city fairly active and reflects in the business done by the wholesale houses. Wholesale merchants report business to be as good as could be expected at this season of the year.

The condition of the company's business in the light and power department continues very satisfactory. The consumption of the Naval Air Station, Pensacola Shipbuilding Co. and American Agricultural Chemical Co. is meeting our expectations and our power plant output is showing a nice increase over this period of last year. According to indications the output for this month should be near 800,000 kilowatt hours as against an average of about 625,000 kilowatt hours for the past three or four months. All of this additional business is day load and is bringing about a splendid operating condition in the power plant. Our normal day load is almost up to our evening peak and is comparatively steady for eight hours a day.

Birney car operation was started on September 10, with six cars on the East Hill line as against five cars under old conditions.

Employment conditions in general are better than at any time during the past summer. There has been nothing of consequence to affect this situation during the past month except the opening of the American Agricultural Chemical Co. plant.

MR. L. L. HIRSCH, formerly assistant chief engineer in our power station, and now chief engineer in Jacksonville power station, paid a visit to Pensacola during the month and returned to Jacksonville with one of Pensacola's young ladies as Mrs. Hirsch. Mrs. Hirsch was Miss Jacobson, a well-known young lady of Pensacola.

MR. M. B. MARSHALL, one of our engineers in the power station, was married during the month to Miss Jameison.

MR. F. B. TURNER, our lighting department student, announces the birth of a son during the month. Mrs. Turner was, before her marriage, Miss Gertrude Kerle, daughter of Mr. A. L. KERLE, who has been in the office of this company for many years.

MR. W. B. ANDERSON, who has been connected with this company for about 11 years, with the exception of 10 months spent in Paducah, resigned his position as assistant treasurer the latter part of September. All of the employees of the company, many of whom have been associated with him for many years, regret this step very much and wish for him the best of success in whatever venture he may undertake in the future.

MR. J. G. HOLTZCLAW, receiver, is leaving this week for Boston to attend the managers' convention.

Pensacola has been visited by a very severe epidemic of dengue fever during the past month. It is estimated that probably one-third of the population of the city has been affected in one way or another. This disease is a form of fever which affects a person for three or four days very seriously, rendering him entirely unfit for business. Many of our employees have had their turn with it, and at this writing quite a few of them are still down.

MESSRS. A. A. HOFFMAN, commercial agent, R. C. WILLOUGHBY, roadmaster, and B. A. JONES, trainman, motored to Mobile to see two ball games of the Dixie championship series played between Fort Worth and Mobile teams, champions respectively, of the Texas league and the Southern league.

A party of employees of the company spent two days on Inerarity Point on the Gulf Beach on a fishing trip during the month. This trip was gotten up for the special purpose of entertaining Mr. THOMAS, of the Westinghouse Traction Brake Co., who has been longing for some of the pleasures of salt water fishing.

#### RENO, NEV., SEPTEMBER 25

The past month has shown a decided improvement in local retail business conditions. In general, for the past three or four months, retail business has been unusually dull, but the past few weeks have brought about a most favorable change in this direction. It is interesting to note that throughout the serious depression the women's furnishing stores have not only not felt the depression, but on the contrary, report an increase of from 30 to 40 per cent over corresponding months of the previous year.

It now appears that the ranchers, sheepmen and cattlemen in this district will find at the end of the season that they have earned approximately the equivalent of day wages, with practically nothing representing interest on investment or profit.

During the past month the Southern Pacific Company has announced the re-classification of its freight rates, which results in a decrease in freight rates from

San Francisco into Reno of approximately 15 per cent, and a decrease in freight rates from Reno to outside points in the state of approximately 20 per cent. This is of very considerable importance to Reno in that it allows the local jobbing houses to compete on better than equal terms with the Sacramento and San Francisco jobbing houses.

The gold dredge operating near Dayton this month again increased the yardage of gravel worked. It is reported, however, that the values are falling below expectations and also that the total yardage available has been decidedly decreased, owing to the fact that a considerable portion of the tract has been found to be either of too low value or of a character too expensive to work.

The new plant of the United Comstock Mines Company was officially placed in operation on Saturday, September 23, at which event, there was a large attendance of local people and also representatives from the mining engineers in attendance at the Mining Engineers' Convention in San Francisco. The mill, however, is not yet in condition to operate and it is probable that no real operation will occur before November 1, although from now until that time, the requirements for power will gradually increase.

Recently announcement was made of a consolidation of companies in Virginia City known as the Comstock Merger Mining Company. These two companies represent a large number of individual mines in different parts of the main lode and are reported to be amply financed to immediately proceed with extensive development work. If the development indicates sufficient ore reserves, it is now planned to construct a mill similar in size to the new mill of the United Comstock Mines Company.

Recently, inquiry was made regarding the power supply for a new cement plant to be constructed at Ludwig to work the extensive gypsum deposits owned at that point by the Nevada Douglas Consolidated Copper Company. It was stated that the machinery for the new plant was underway and that the plant should be in operation early in 1923. The Cement Company's officer stated that the first year's production of the plant had already been contracted.

While there is very little difficulty in securing all the labor desired, it is found to be almost impossible to retain it for any length of time, with the result that a very rapid labor turn-over is being felt. This is caused by the fact that laborers coming in from the hay fields are flushed with money and are not at all anxious for the present to perform any hard labor, at least until the spending of their accumulated savings makes this necessary. There is, however, very little difficulty in finding employment by any men who desire steady work.

MR. and MRS. H. H. CARPENTER, have just returned from their honeymoon spent in San Francisco and other bay points. They also attended the Pacific Coast Gas Association Convention at Santa Barbara.

MR. D. R. JAKES, purchasing agent, has just returned from the East, where he visited the Boston office.

MR. CAMPBELL was in San Francisco on business from the 15th to the 20th. He also attended the official opening of the United Comstock Mines Company's new mill at Virginia City on the 23rd of this month.

MR. E. J. SEABORN and MR. JAMES MURRAY have returned from a trip to Georgetown, where they went to audit the books of the company and, incidentally, spent some of the time hunting deer, but had no luck.

MR. PAUL MURDOCK has recently taken the position of clerk for this company, having resigned from a mining company in California to accept this position.

MRS. GALE and MRS. CROWLEY have recently returned from their vacations, as has MR. SEABORN.

MISS MYRTLE CAMERON, who has been in the organization for several years, was recently married to MR. W. H. McINNIS, who was formerly with this company as sales agent, and is now with the Keokuk Electric Company in a similar position. They will spend their honeymoon in San Francisco, the Grand Canyon in Colorado, Denver, Kansas City, Chicago and will then return to Keokuk.

#### SAVANNAH, GA., SEPTEMBER 25

In general, other than the seasonal activity in the fertilizer industry, the industrial depression which has prevailed in Savannah for a considerable period continues with very little indication of an immediate improvement. The Diamond Match Company which curtailed its operation temporarily last month, due to conditions arising from the railroad strike, resumed operation after remaining closed down for two weeks.

During the month of July, 78 ships entered the port of Savannah with a total tonnage of 209,865; of this number of ships 63 were American.

The cotton exports from Savannah since August 1, 1922, are 57,624 bales in comparison with 101,797 bales for the corresponding period last year.

In the naval stores exports, the shipments of turpentine since April 1 are less than during the same period in 1921, while the exports of rosin have shown some increase over last year.

Since September 1, 1922, a total of 4,642,000 feet of lumber has been shipped from Savannah, of which amount 690,000 feet were shipped to foreign ports.

According to an analysis of the country's foreign trade made by the U. S. Shipping Board for the year ending June 30, 1922, Savannah's imports amounted to 213,000 tons and exports to 659,000 tons.

There was a substantial increase in receipts by the Savannah post office for August over the same month last year. The receipts for August, 1922, were \$38,546 against \$34,549 last year.

The cotton market continued steady with a slight decline in the prices of this commodity in comparison with quotations of a month ago. The naval stores market remains somewhat quieter. The gross receipts of cotton since August 1, 1922, amount to 104,299 bales against 115,597 bales last year. The naval stores receipts since April 1, 1922, amount to 66,925 casks of turpentine and 208,121 barrels of rosin as against 66,408 casks of turpentine and 179,111 barrels of rosin for the corresponding period in 1921.

The local wholesale and retail merchants report that business is very slack, and there is no present prospect of an immediate improvement in their business.

The Birney cars are operating satisfactorily on both Habersham Street and the A. & B. belt lines, and continue to meet the favor of the patrons of those lines.

The kilowatt hours generated by our plants thus far in September indicate a substantial increase over that of the corresponding period in 1921.

The outlook for our light and power department during the fall months seems to be bright as the fertilizer factories have shown improvement, and all of them have resumed operation with the exception of three. The cotton seed mills have also shown some increase in their operation. The activities of these industries are more or less seasonal and contribute largely to the increase in our generating plants' output.

There has been considerable activity in real estate during the month, and quite a little building is going on. During the month of August, 1922, 57 building permits were issued valued at \$77,340. This is in comparison with seventy-three (73) permits valued at \$137,065 issued during August, 1921.

There has been some reduction in the number of unemployed, due to increased activities of the fertilizer factories and the cotton seed mills. However, labor of all classes continues to be plentiful with the possible exception of skilled help in the building trade.

MR. R. C. BROOKS, manager, has returned with his family from Saluda, N. C., where he spent a very pleasant vacation.

MR. H. C. FOSS, district manager, returned to Savannah, September 4, after spending several weeks in the North.

On Wednesday, September 6, the regular monthly meeting of the Savannah Electric Benefit Association was held at the Casino at Thunderbolt. Although about two hundred and fifty or three hundred were present, the attendance was smaller than usual because of the large amount of sickness. After the business session a very pleasant entertainment was given, after which dancing was enjoyed. Among the numbers on the program was a guitar and mandolin trio by C. C. DRUMMOND, of the accounting department, and MESSRS. H. A. SAULS and HERMAN WARTH of Savannah. Music for the dancing was furnished by RABEY's orchestra. MR. RABEY is an employee of the billing department.

MR. B. L. GROOMS, manager of the Key West Electric Company, MR. T. J. HANLON, manager of the Tampa Electric Company, MR. J. P. INGLE, manager of the Jacksonville Traction Company, MR. J. G. HOLTZCLAW, receiver of the Pensacola Electric Company and MR. T. L. SMALL, manager of the Baton Rouge Electric Company, were visitors in Savannah during the month.

MR. W. J. HEARNE, foreman of the meter department of the Tampa Electric Company, paid us a visit during the month while enroute to Tampa from Atlanta, where he attended the convention of the Southeastern Division of the National Electric Light Association.

The result of the dengue fever, which has prevailed in Savannah for several weeks, has been very noticeable in this company, due to the number of employees who have been sick with fever.

MR. H. R. WHITON, secretary to MR. WETTERER, spent a few days in Savannah during the early part of the month.

R. H. BRINSON, motorman, who had been in the employ of this company for several years, passed away on September 15, following an operation several days previous for appendicitis. MR. BRINSON was vice-president of the Savannah Electric Benefit Association, and was well liked by the patrons of the lines on which he worked.

MR. P. R. WILLIAMS and MR. DAOGETT, of the auditing department, arrived in Savannah on September 18 to make an audit of this company.

MR. A. J. MONNEN, assistant chief engineer, spent several days in Jacksonville, Florida, recently on business.

MR. T. D. FULFORD arrived in Savannah on September 23 to take up his duties in the commercial department. MR. FULFORD was transferred from Seattle, Washington.

MR. J. E. COOMBS, chief billing clerk, has returned from his vacation which he spent at his home at Covington, Kentucky.

MR. W. B. LATTIMER, chief engineer of the Houghton County Properties, Houghton, Mich., spent a short while in Savannah during the month of September.

SYDNEY, N. S., SEPTEMBER 23

At the time of writing the last conditions letter, August 23, all the coal miners of Nova Scotia were out on strike, the mines were flooding because pumpmen had been called out by the U. M. W., along with the miners; approximately 1,000 troops from various parts of Canada were here to prevent destruction of property and maintain law and order; the steel plant was practically shut down as a result of the coal strike; merchants were cancelling orders for goods; people who had money were holding onto it, and in general, business conditions were at a low ebb. During the intervening month many things have happened and although it would be too much to expect an early return to prosperity, every one is now feeling more cheerful and looking forward to a gradual improvement with steady work for miners and steel workers through the winter.

The new contract, which incidentally has not yet been signed but probably will be executed within the next day or two, is not materially different from agreements which the company had several times previously expressed itself as being willing to make, except as to the life of the agreement, which has now been lengthened.

The miners went back to work Tuesday, September 7, and although some of the mines required a large amount of work in order to make them fit for getting out coal still remarkable progress has been made, and at the present time a good output is being obtained. Coal is now being shipped up the St. Lawrence and on a smaller scale to New England ports. The price has stiffened somewhat and everything points to a winter of activity at the mines.

Immediately after the coal strike was settled the steel plant resumed operations, blowing in a second blast furnace on September 6 and resuming work in other departments, taking on more men from day to day.

Immediately upon settlement of the coal strike there was a marked change in the general atmosphere surrounding local wholesale and retail business. The psychological improvement was remarkable and will undoubtedly soon manifest itself in more material ways. The miners' new rate of pay was made retroactive to July 15, 1922, and last Saturday, September 16, approximately \$100,000 in back pay was distributed among 9,000 miners in the Glace Bay district. Back pay has not yet been distributed among the miners at Sydney Mines but will be shortly.

With the hearty and loyal co-operation of everyone connected with this company general reductions in wages amounting to approximately 5 per cent were made as of August 1 and this, together with the strictest economy, enabled us to reduce operating expenses materially during August.

It is expected that there will be steady improvement in light and power earnings through the balance of the year, not only because of the ordinary seasonal increase but also on account of the better feeling prevailing throughout the community.

The trend of building operations, which turned suddenly downward at the beginning of the strike, has again pointed upward. Considerable residential building is going on.

There is probably less unemployment in Cape Breton at the present moment than for a considerable time.

MR. A. S. PRATT, arrived in Sydney, September 20, from Boston, and is making an inspection of the company's property.

MR. G. G. SPENCER, assistant treasurer, left on Tuesday, September 19, for a visit to the Boston office.

MR. E. O. SMITH, assistant railway superintendent, who has been in our employ



since June, 1920, severed his connection with the company and left Sunday night, September 17, for Boston, where he will reside.

MR. R. A. LANDRY, power station operator, has been transferred to Ponce, and left Sydney on September 5.

MISS FAIRY CAMPBELL, railway cashier, returned Monday, September 18, from Halifax, where she spent two weeks' vacation.

MISS MARGARET McDONALD, clerk in the railway department, returned Labor Day, September 4, from her vacation spent in Whycocomagh and vicinity.

MR. CHARLES McDONALD, meter reader, left our employ on September 16, and has gone to New York.

#### TAMPA, FLA., SEPTEMBER 21

The cigar industry is running at top speed, and payrolls paid out by the Exchange Bank during the past week are \$11,000 higher than the corresponding week in July. The factories have a large number of orders on hand and are handicapped by lack of cigarmakers. An effort is being made to overcome this shortage by bringing cigarmakers from Havana, but the new immigration laws are proving an obstacle. Work is on hand for two thousand additional men in the cigar business.

In the phosphate business conditions still remain dull and phosphate rock is selling cheaper than gravel. No change in this situation is looked for until foreign conditions improve, as the shortage in shipments is in export business.

Retail merchants, who have had a particularly dull summer, report that there is some slight improvement at this time. Jobbers, whom the banks report as having lost money for the first half of the year, report that prospects of sales are much improved but that collections remain poor.

The Exchange National Bank states that at this time last year they owed \$450,000 and had less deposits and more loans than they have at this time. Since the business men began to clean house last October there has been a much better local situation and the bank believes that its affairs, as well as those of the other banks in the community, are on a very much more sound and healthy basis; that the bottom of the local depression has been reached and while business may remain stationary for another month, a distinct improvement is looked for in October, and this improvement will continue throughout the fruit shipping season.

There has been a slight increase in combined gross earnings. It seems to us that in the past week there has been some improvement. In the lighting department we are connecting many new residence customers, and we believe that with the approach of the tourist season we may look for our usual increase.

We estimate that there are five hundred vacant houses in the territory served by this company. Building activities are not unusual, and there is little to comment on.

There still seems to be an abnormal number of applications for work.

With the exception of the ornamental posts for Suburb Beautiful and along the Bayshore Drive, the company has completed the substitution of electric incandescent lights for gas lamps in the city of Tampa. The same change is now being made in West Tampa.

MR. PETER O. KNIGHT, accompanied by his family, will leave the latter part of September for New York City. MR. KNIGHT will later go to Boston to attend the meeting of Stone & Webster executives to be held in October.

MR. THOMAS J. HANLON, JR., will leave September 26 for St. Louis. There he will be joined by Mrs. Hanlon, who will accompany MR. HANLON to the convention of

the American Electric Railway Association. From Chicago Mr. HANLON will go to Boston to attend the meeting of executives.

MR. THOMAS C. FOLSOM, superintendent of track and roadway, has invented a new track switch, which is a decided improvement over previous types used in Tampa, especially on lines where Birney cars are operated. Mr. FOLSOM will attend the Chicago convention of the American Electric Railway Association, and his switch will be on exhibit in the booth of the Lorain Steel Company.

MR. C. D. MAY, one of our Birney car operators, died September 3.

#### WOONSOCKET, R. I., SEPTEMBER 21

Although there has been very little change in the cotton industry locally, there seems to be considerable optimism and indication that business will proceed with a fair volume upon the pre-strike wage basis. In the woolen and worsted business, local manufacturers appear to look optimistically towards the manufacture for spring trade. This optimism is probably due to recent strength in prices and the fact that a year of more or less reduced production has lowered stocks.

There is no material change in the local machine industry. The Taft-Pierce Manufacturing Company is using very nearly its normal amount of power, although there is no other indication of good business with them.

Local merchants appear to be optimistic and look forward to a revival of better retail business conditions from the recent slump caused by labor troubles.

It is expected that increased operations in the textile industries will be reflected by an increase in power output in the local mills. Several additions to load contracted during the spring and summer will shortly begin taking power up to amounts of their contracts.

The Main Street Power Company, which has up to date furnished electric service to its tenants in the Commercial Building, has turned over to us during the past week ten (10) commercial lighting customers, in addition to other customers which we previously secured in this building.

Our electric iron campaign is progressing satisfactorily, a total of three hundred and fifteen (315) electric irons having been sold from August 19 to September 19. During this same period we sold one hundred and ninety-one (191) gas irons.

The Manville Company have awarded a contract to build an addition to their mill at Manville, R. I. It is understood that this addition will be about 300 feet long, 180 feet wide and two stories high.

MESSRS. W. L. CHENEY, superintendent of distribution, F. K. SIMMONS, industrial service engineer, and C. B. HEALY, accountant, attended the convention of the New England section of the National Electric Light Association, held at New London, Connecticut, September 5 to 8, inclusive.

MR. MICHAEL TUITE, operator at our No. 2 station, died September 14, 1922. MR. TUITE had been in the employ of the company four years.

MISS MADELINE FRANKLIN and MISS MARION WALES have joined the force of the accounting department.

MR. NORMAN L. BROWN has re-entered the employ of the company as operator at our No. 1 station.

MR. E. L. MILLIKEN, attended the National Safety Congress in Detroit in August, later spending two weeks in Houghton.

MISS FLORENCE MURRAY has entered the employ of the company as clerk in the station engineer's office, to fill the vacancy of Miss GERTRUDE SANDERSON, who recently resigned to be married.

## Library Notes

### Greetings to the Managers

**T**HIS past year there have been signs, particularly from Texas, that the men in the field are becoming minded to make more and more use of the facilities of our Library Department, and not to let such facilities be almost altogether an asset of those who happen to be quartered in the Boston office.

There is not room here to describe the Library. Look in at your convenience and you will quickly get an impression of what it contains. Essentially it is a "working library," with almost no literature for general reading. But, like so many business libraries, it is also an information bureau, an agency for getting answers when the usual books and pamphlets in its own collection do not avail. These answers may come from books in other departments, some of which are referred to in our card catalogue; or they may come from books in outside libraries or other organizations; or they may come from individuals, as sources of information, within the office or without.

Note that the list of Library Accessions, in the *STONE & WEBSTER JOURNAL* each month, is fairly complete, and that the "Library Notes" call attention to various of the accessions and other matters of timely interest. In the *JOURNAL* for August there was a list of discarded literature, and a request came from Mr. Clifford of Fort Worth for some of the material. In our discards are many a book and many periodical numbers that managers or members of their companies would find useful; and they should feel that upon request they may receive special notice of such material. Moreover, in adding to the Library we are often guided, and should like to be still more guided, by requests from members of the organization. Managers may to advantage bear this in mind.

By way of suggesting the Library Service in some of its less obvious aspects, the following notes of recent accessions are offered. The numbers refer to accession slips that are used for the memoranda in process of getting material to the shelves:

13838. "Kimber's Record of Insurance Company Security Purchases During 1921." This is kept in the Securities Department, which also keeps many publications that bear

upon its work. It is customary for the Library thus to accession books that are so special as to be kept elsewhere; and the suggestion arises that it might be well to have record of special books that are owned in the different companies, and could be sent across country as occasion arises.

13796. "Catalogue of Officers and Graduates of Yale University, 1701—1915." There is occasional demand for alumni lists, of which we have but few. Consequently, we are in process of locating collections of these lists in Greater Boston. We are likely to find that the largest collection is at the Harvard College Library. That library, however, is inconveniently far off for quick reference purposes, so that we also wish to have a knowledge of where such publications are available in the business district. It will take some time to build up a satisfactory record of their whereabouts; but this is the character of the service that various special libraries are now attempting to give, and it may prove to be a co-operative undertaking.

13767. "Destruction by Marine Borers." To what extent managers are interested in this subject the Library would hardly dare to guess; but upon request we can bring down to date a bibliography of Marine Borers, such as we have been requested to make in times gone by.

13816. "The Boston Directory": a book familiar for its general purposes; yet how many are familiar with its contents in all their ramifications? It should here be said that there is a committee of the Special Libraries Association of Boston at work upon the subject of addresses. This committee needs to be encouraged to see the work through to a finish, since to do it thoroughly is likely to be a matter, not of days, weeks or months, but of years. When published it should take the form of a loose-leaf guide continually brought down to date. What manager does not have the problem of finding post office addresses?

13774. "Brown's Directory of American Gas Companies and Gas Engineering and Appliance Catalogue." This is in the same class with the McGraw Electrical Directories, two books—so expensive that they need to be well guarded lest they may have strayed away when needed. To be familiar with these is a matter of time. The gas directory is kept in Mr. Vittinghoff's office. Such books, even when partly superseded, after their successors have come, might be appreciated by the managers.

13808. "United States Supt. Documents Price Lists, 37, 39, 41, 54, 58, 59." These few suggest that many others exist. Ask to see them and then consider which ones will be of likely use to you in your work, or to the members of your organization. They are valuable not only as price lists but as bibliographies, and to know them well is one feature of knowing public documents well—a big study.

13823. "Public Service Commission State of West Virginia, 7th and 8th Annual Report." This is hardly suggestive of what we immediately need, but is a reminder that our collection of Public Service Reports is not so extensive as formerly because we receive the "Public Utilities Reports Annotated." In our unconscious system of sponsorship we naturally look to Mr. Nash for what to add and what to discard amongst reports of this kind; but we have yet to develop the sponsorship system so systematically as to have in print "Who's Who in the Office" and what his specialties are.

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Enough has been cited to suggest what the Library Service covers or what it ought to cover. There seems no better way to make the Library thoroughly useful to the companies than by issuing sheets on various subjects in response to requests. These sheets could together make up a loose-leaf guide, and the companies each could have such of the sheets as they cared for without encumbering themselves with those that do not bear upon their immediate interests.

Members of the Library staff would be glad to talk over the service with all who visit the department, and doubtless in such talk many an idea would be forthcoming that would advance the interests of all concerned.

G. W. LEE.

# Library of Stone & Webster, Inc.

## Recent Accessions

### (10) CIVIL, (20) ELECTRICAL ENGINEERING

- 399 The Municipal Bridge of St. Louis: a record of municipal effort. W. E. Rolfe and L. H. Cannon. St. Louis Public Library, August, 1922. (30p), 6½x9½. \*0734.R644
- 400 Construction of the Catskill water supply for the city of New York from an engineering standpoint. J. W. Smith. [Reprinted from lectures on Engineering Practice.] The Johns Hopkins University. Baltimore, 1921-22. 65p. 6x9, illus. \*1791.Sm61.0736
- 401 Report of Hydro-electric Commission, State of South Dakota, 1920: containing a summary of the Hydro-electric Commission, South Dakota findings of the Fargo Engineering Co. in its check upon report of Mead & Seastone "On the Feasibility of Hydro-electric Development from the Missouri River in South Dakota." Pierre, nd. 10p, 6x9. \*4600.H999.05.1920
- 402 Report by the Committee on Electricity to the Corporation of Glasgow: with account of revenue and expenditures, and balance sheet applicable thereto, of the corporation of the city of Glasgow, Electricity Department. . . Glasgow, 1922. 59p, 8x13. \*7291.0511.6/1/21-5/31/22

### (40) MINING

- 403 Mineral resources of the United States, 1921, (preliminary summary) published Sept. 14, 1922. United States Geological Survey. Wash., 1922. 102p, 6x9. \*6874.075.1921P
- 404 Mining companies and tables of statistics, 1922. Hayden, Stone & Co. Boston [c1922]. 91p, 3½x5. \*025.H324

### (50) RAILROADS

- 405 Outline of the projected Tokyo Underground Railway. 1922. The Tokyo Underground Railway Co., Ltd. Tokyo, 1920. vp, 6x9. \*8281.0221.1922
- 406 Poor's Manual of Railroads. Fifty-fifth annual number, 1922. Poor's Publishing Co. New York [c1922]. 2104p, 6x9. \*022.P79.1922

### (74) FINANCIAL

- 407 Kimber's record of insurance company security purchases during 1921. 1922 ed. . . . Published by A. W. Kimber & Co. New York [c1922]. 405p, 6x9. \*055.K569.1922
- 408 Kimber's record of government debts and other foreign securities, 1922. Edited by A. W. Kimber. Published by A. W. Kimber & Co. New York [c1922]. 809p, 6x8. \*055.K569g.1922
- 409 Engineer's valuing assistant: being a practical treatise on the valuation of collieries and other mines with rules, formulæ, and examples—also a set of valuation tables . . . tables of value . . . H. D. Hoskold . . . with an introductory note by the late Peter Gray. 2d ed. New York, 1905. 185p. 5½x8. \*024.H7935
- 410 Balance sheets and profit and loss statements analyzed and defined for business executives. Bureau of Commercial and Industrial Affairs, Committee on Industrial Accounting and Executive Reports. Boston Chamber of Commerce. Boston [c1922]. 36p, 6x9. \*1461.C35.024

- 411 Classification and definitions of ledger accounts. Bureau of Commercial and Industrial Affairs, Committee on Industrial Accounting and Executive Reports. Boston Chamber of Commerce. Boston [c1922]. 34p, 6x9. \*1461.C35.024c

## (75) REPORTS

- 412 Best's insurance reports (fire and marine ed.). Twenty-second annual edition 1922-23. New York [c1922]. 938p, 8x11. \*055.B464.1922-23
- 413 Interim report of the Public Service Securities Committee, Investment Bankers Association of America. Adopted by Board of Governors, July 21, 1922. Chicago, 1922. 6p, 6x10. \*6901.0221.1921
- 414 The Public Service Commission of West Virginia. Seventh-eighth annual reports. Periods beginning July 1, 1919, and ending June 30, 1920; and beginning July 1, 1920 and ending June 30, 1921. Charleston, nd. 946p, + 6x9. \*2404.7/1/19-6/30/21
- 415 Twenty-seventh annual report of The John Crerar Library for the year 1921. Chicago, 1922. 38p, 7x10. \*2731.C86.1921

## (76) LEGAL

- 416 The tariff: full text of act to provide revenue to regulate commerce with foreign countries—to encourage the industries of the United States—and for other purposes. . . . Approved Sept. 21, 1922. Index to schedules. Section two of the Commercial and Financial Chronicle, Sept. 23, 1922. 32pl 8½x13. \*6800.03181.1922
- 417 Rules of procedure for conciliation and arbitration of the International Chamber of Commerce . . . list adopted by the Council of the International Chamber of Commerce on July 10, 1922. Brochure No. 21. Paris, 1922. 39p 6x9. \*037.In82
- 418 International Chamber of Commerce: Digest No. 27—The future of arbitration. E. R. Streat.  
Digest No. 28—American views on the questions of reparations and inter-allied debts.  
Digest No. 29—Deflation or devaluation: two memoranda submitted to the Genoa conference. M. G. Vissering and M. O. Lepreux. Paris, nd. vp, 8½x10½. \*037.In82.Cir. 27, 28, 29

## (90) SOURCES OF INFORMATION

- 419 The Boston Directory: . . . with map. No. CXVIII, for the year commencing July 1, 1922. Boston [c1922]. 2823p, 7x10. \*1461.093.1922
- 420 Lockwood's Directory of the paper, stationery and allied trades. . . . 1923. Lockwood Trade Journal Co., Inc. New York [c1922]. 984p, 6x9. \*093.L81.1923
- 421 Rand McNally Bankers Directory and the Bankers Register with list of attorneys. . . . The Bankers Blue Book. 93d ed. July, 1922. Rand McNally & Co. Chicago [c1922]. 2540p, 8x11. \*025.R15.7/22
- 422 Official Register of Harvard University. Faculty of Architecture. School of Landscape Architecture, 1922-23. Vol. XIX, No. 37, June 28, 1922. Cambridge, 1922. 63p, 5x8. \*1445.H26l.1922-23
- 423 McGraw Electric Railway Directory, Aug., 1922. McGraw-Hill Co., Inc. New York [c1922]. 279p, 4½x8½. ERD.8/22
- 424 Index to the year books of United States Department of Agriculture, 1911-1915. United States Department of Agriculture. Wash., 1922. 178p, 6x9 \*6880.096

- 425 Boston: an old city with new opportunities. Boston Chamber of Commerce, Bureau of Commercial and Industrial Affairs. Boston [c1922]. 64p, 6x9, illus, map. \*1461.C35.o2
- 426 Table of certain officials of 143 cities of the United States and Canada—compiled by M. W. Dietrichson, Librarian of the Business and Municipal Library (branch of Public Library), Minneapolis, Minn. Municipal Reference Library Bulletin, No. 73. St. Louis, 1922. \*096.D5678
- 427 Courses offered for correspondence and class instruction, 1922-23. Bulletin of the Massachusetts Department of Education. Vol. VII., No. 5. Sept., 1922. Whole No. 47. Boston, 1922. 37p, 6x9. \*1400.Ed835.No.47.1922-23
- 428 State-supported University Extension courses offered for correspondence instruction. Massachusetts Bulletin of the Department of Education. Vol. VII., No. 5A. Sept., 1922. Whole No. 48. Boston, 1922. 15p, 6x9. \*1400.Ed835.No.48
- 429 Report of the Committee on "Societies Address Lists." Sept., 1922. To the Special Libraries Association. Three typewritten sheets, 8½x11. \*096.Sp3180
- 430 Statistics of private, commercial and business schools, 1919-20 . . . including statistics of shorthand systems taught and studied in 832 schools, 1919-20. United States Bureau of Education. Bulletin, 1922, No. 4. Wash., 1922. 11p 6x9. \*6873.B4.1922
- 431 Office management: a new constructive monthly magazine on business methods. Sept., 1922. Published by Filing, Inc. New York, 1922. 31p 8½x11. O Mgmt.9/22
- 432 Birds and wild animals. Price List 39, 12th ed. April, 1922. 9p, 6x9. \*6806.Pl39.4/22  
Insects: bees, honey and insects, injurious to man, animals, plants and crops. Price List 41, 12th ed. April, 1922. 27p, 6x9. \*6806.Pl41.9/22  
Mines, explosives, fuel, gas, gasoline, petroleum. Price List 58, 9th ed. April 1922. \*6806.Pl58.4/22  
Publications of Interstate Commission, reports and regulations on interstate transportation. Price List 59, 9th ed. March, 1922. \*6806.Pl59.3/2  
Political science: documents and debates . . . Price List 54, 8th ed. March, 1922. 28p, 6x9. \*6086.Pl54.3/22  
Tariff and taxation. Price List 37, 9th ed. April, 1922. 34p, 6x9. \*6806.Pl37.4/22 (The above are Price Lists of government publications issued by the Superintendent of Documents, Wash.)

## MISCELLANEOUS

- 433 Sensitometry of photographic emulsions and a survey of the characteristics of plates and films of American manufacture. . . . Scientific Paper No. 439. United States Bureau of Standards. Wash., 1922. 120p, 7x9. illus. \*6898.Sp439
- 434 Industrial relations and the churches. [In] The Annals of the American Academy of Political and Social Science. No. 192. Sept., 1922. Concord, 1922. 234p, 7x10. \*029.Am35ic



# Coupons and Dividends Due

	Per Cent.
Oct. 1, Beaumont Traction Company, 5s, 1943.....	2½
Oct. 1, Columbus Power Company, The, 5s, 1936.....	2½
Oct. 1, *Columbus Electric and Power Co., 1st Preferred Stock.....	1¾
Oct. 1, *Columbus Electric and Power Co., 2nd Preferred Stock.....	1¾
Oct. 1, Connecticut Power Company, The, 5s, 1963.....	2½
Oct. 1, *Eastern Texas Electric Company, Common Stock.....	2
Oct. 1, Everett Railway, Light and Water Company, 5s, 1925.....	2½
Oct. 1, Galveston-Houston Electric Railway Company, 5s, 1954.....	2½
Oct. 1, *Haverhill Gas Light Company, Capital Stock (\$50 par).....	2½
Oct. 1, Houghton County Electric Light Company (Coupon Notes), 7s, 1923.....	3½
Oct. 1, Mississippi River Power Company, Preferred Stock.....	1½
Oct. 1, Nevada Power, Light and Water Company, 6s, 1932.....	3
Oct. 1, New London Gas and Electric Company, The, 5s, 1927.....	2½
Oct. 1, New London Gas and Electric Company, The, 5s, 1929.....	2½
Oct. 1, *Ponce Electric Company, Preferred Stock.....	1¾
Oct. 1, Savannah Electric and Power Co., 7½s, 1941.....	3¾
Oct. 1, *Savannah Electric and Power Co., Debenture Stock.....	2
Oct. 1, Savannah Electric and Power Co., Preferred Stock.....	3
Oct. 1, *Savannah, Thunderbolt and Isle of Hope Railway, The, 4s, 1947..	1
Oct. 1, Tacoma Railway and Power Company, 5s, 1929.....	2½
Oct. 1, Woonsocket Electric Machine and Power Company, 4½s, 1943..	2½
Oct. 15, *Puget Sound Power and Light Company, Preferred Stock.....	1½
Oct. 15, *Puget Sound Power and Light Company, Common Stock.....	1
Oct. 15, *Puget Sound Power and Light Company, Prior Preference Stock..	1¾
Nov. 1, Cape Breton Electric Company, Limited, Preferred Stock, 6 per cent.....	3
Nov. 1, Eastern Texas Electric Company, 5s, 1942.....	2½
Nov. 1, Eastern Texas Electric Company (Coupon Notes), 7s, 1925.....	3½
Nov. 1, *Edison Electric Illuminating Company of Brockton, Capital Stock	2½
Nov. 1, *Fall River Gas Works Company, Capital Stock.....	3
Nov. 1, Galveston Electric Company, 5s, 1940.....	2½
Nov. 1, Houghton County Electric Light Company, Preferred Stock, 6 per cent.....	3
Nov. 1, Jacksonville Electric Company, 5s, 1927.....	2½
Nov. 1, *Lowell Electric Light Corporation, The, Capital Stock.....	2½
Nov. 1, Mississippi River Power Company (Debentures), 7s, 1935.....	3½
Nov. 1, Paducah Electric Company (Debentures), 6s, 1939.....	3
Nov. 1, Pawtucket Gas Company of New Jersey, The, 4s, 1932.....	2
Nov. 1, *Public Service Investment Company, Preferred Stock, 6 per cent..	1¾
Nov. 1, *Public Service Investment Company, Common Stock.....	1¾
Nov. 1, Puget Sound Power and Light Company, 7½s, 1941.....	3¾
Nov. 1, Railway and Light Securities Company, 5s, First Series, 1935; Second and Third series, 1939; Fourth series, 1942; Fifth series, 1944; Sixth series, 1946.....	2½
Nov. 1, *Sierra Pacific Electric Company, Preferred Stock, 6 per cent....	1¾
Nov. 1, Whatcom County Railway & Light Company, 5s, 1935.....	2½
Nov. 15, *Keokuk Electric Company, Preferred Stock, 6 per cent.....	1¾
Nov. 15, *Tampa Electric Company, Capital Stock.....	2½

\*Payable quarterly.

Dividend rates based on the last declaration.

# Quotations on Securities of Companies under Stone & Webster Management

October 3, 1922.

The Securities Department executes orders on commission for those wishing to purchase or sell.  
Requests for information in regard to the companies will be answered promptly.

COMPANY	BONDS		PREF. STOCK		COMMON STOCK	
	Int. Rate	Price and Int.	Div. Rate	Price	Div. Rate	Price
Ab. & Rock., The El. Lt. & Pr. Co. of { Notes, July, 1923	7%	100½	No	Pref	8%	135
Baton Rouge Elec. Co. { Bonds, 1939 Notes, Jan., 1923	5% 7%	92 115	6%	86		
Blackstone Valley Gas & Elec. Co. (Common Stock par value \$50)	5%	100	*6%	93	10%	75
Cape Breton Elec. Co., Ltd.	5%	83	6%	65		12
Central Mississippi Valley Electric Properties	No	Bonds		75		12
Chicago, Wilmington & Franklin Coal Co. (Common Stock par value \$10)			*6%	90	10%	25
Columbus Elec. & Power Co.	6%	104	*7% 1st *7% 2d	103 88		93
Columbus Power Co., The	5%	98		.....		.....
Connecticut Power Co., The	5%	96	*6%	93		
Connecticut Valley Lumber Co. { Serial Bonds June, '23-'34	6%	100 96½				
Eastern Texas Elec. Co. { Bonds, 1942 Notes, May, 1925	5% 7%	94 101½	*6%	83	8%	94
Edison Elec. Illg. Co. of Brockton { Bonds, 1930	5%	100	No	Pref	10%	187
El Paso Elec. Co. { Bonds, 1932 Notes, 1925	5% 7%	95 101½	6%	88	10%	125
Fall River Gas Works Co.	No	Bonds	No	Pref	12%	216
Galveston Elec. Co.	5%	88		.....		.....
Galveston-Houston Elec. Co. { Notes, Aug., 1925 Notes, Feb., 1926	7% 8%	102 100	*6%	70 B L		32 B L
Galveston-Houston Elec. Ry. Co.	5%	88	No	Pref		.....
Haverhill Gas Light Co. (Stock par value \$50)	No	Bonds	No	Pref	9%	85
Houghton County Elec. Lt. Co. { Bonds, 1927 Notes, 1923 (Stock par value \$25)	5% 7%	92 100	6%	20		12

COMPANY	BONDS		PREF. STOCK		COMMON STOCK	
	Int. Rate	Price and Int.	Div. Rate	Price	Div. Rate	Price
Houston Elec. Co.	5%	99½ <sup>B</sup>		.....		.....
Jacksonville Elec. Co.	5%	91½				
Jacksonville Tract. Co.	5%	86		37		7
Keokuk Electric Co. { Notes, January, 1923	6%	100	*6%	80		.....
Key West Elec. Co., The	5%	84		.....		.....
Lowell Elec. Lt. Corp., The	No	Bonds	No	Pref	10%	187
Mississippi River Power Co. { Bonds, 1951 Debtentures, 1935	5% 7%	96 <sup>B</sup> 104	*6%	85 <sup>A</sup> <sup>B</sup>		31 <sup>A</sup> <sup>B</sup>
Northern Texas Elec. Co.	5%	89	6%	84 <sup>B</sup> <sup>L</sup>	8%	87 <sup>B</sup> <sup>L</sup>
Northern Texas Traction Co.	5%	95	No	Pref		.....
Pacific Coast Power Co.	5%	94	No	Pref	No	Com
Pensacola Elec. Co.	5%	86		28		6
Public Service Investment Co.	No	Bonds	*6%	85		103
Puget Sound Elec. Ry.	5%	88 <sup>B</sup>		.....		.....
Puget Sound Power Co.	5%	97	No	Pref	No	Com
Puget Sound Power & Light Co. { Notes, 1925 Bonds, 1941	8% 7½%	100 106½	Prior *7% *6%	†107 †84	4%	†56
Railway & Light Sec. Co. { First Series, 1935 Second Series, 1939 Third Series, 1939 Fourth Series, 1942 Fifth Series, 1944 Sixth Series, 1946	5% 5% 5% 5% 5% 5%	96½ 96 96 95½ 95½ 95	*6%	88	6%	80
Savannah Elec. Co.	5%	88 <sup>B</sup> <sup>L</sup>				
Savannah Elec. & Power Co.	7½%	107	*8% *6%	102 70		18½
Seattle Elec. Co., The { 1st Mortgage, 1930 Cons. & Ref., 1929 Seattle-Everett, 1939	5% 5% 5%	99½ <sup>B</sup> 97 93	No	Pref	No	Com
Sierra Pacific Elec. Co.			*6%	77		8½
Tacoma Ry. and Pr. Co.	5%	88	No	Pref		.....
Tampa Elec. Co.	5%	95	No	Pref	10%	137
Whatcom County Ry. & Lt. Co.	5%	94	No	Pref	No	Com

Quotations are approximate. All stocks \$100 par value unless otherwise specified.

\*Cumulative. †Ex-Dividend. A. Listed on London Stock Exchange. B. Listed on Boston Stock Exchange. L. Listed on Louisville, Ky. Stock Exchange. N. Common shares have no par value. X. Ex-rights.

The Securities Department wishes to bring to the attention of members of the organization the following securities which it recommends for investment :—

<i>Bonds</i>	Rate	Interest and Dividend Dates	Price and Interest	Yielding About
*MISS. RIVER POWER CO. First Mortgage, due 1951	5	Jan. and July	Market (96)	5.25%
†EASTERN TEXAS ELEC. CO. Gold Mortgage, due 1942	5	May and Nov	94	5.50%
SEATTLE ELEC. CO. Cons. and Ref. due 1929	5	Feb. and Aug.	97	5.50%
PENN. POWER & LIGHT CO. First and Ref., due 1952	5	Apr. and Oct.	92½	5.50%
COLUMBUS ELEC. & POWER CO. First and Ref., Mortgage due 1947	6	June and Dec.	104	5.70%
*UNITED LIGHT & RYS. CO. First Lien and Cons. due 1952	6	Apr. and Oct.	98	6.15%
*PUGET SOUND POWER & LIGHT CO. Gen'l and Ref., due 1941	7½	May and Nov.	106½	6.85%
<i>Notes</i>				
†EASTERN TEXAS ELEC. CO. Conv. Notes due May, 1925	7	May and Nov.	101½	6.35%
*EL PASO ELECTRIC CO. Gold Notes, due July, 1925	7	Jan. and July	101½	6.40%
†GALVESTON-HOUSTON ELEC. CO. Gold Notes Series A, due Aug. 1, 1925	7	Feb. and Aug.	101½	6.50%
<i>Investment Stocks</i>				
‡BLACKSTONE VALLEY GAS & ELEC. CO. Common	10	Mar. 1 qrtly.	75	6.90%
MISS. RIVER POWER CO. Cumulative Preferred	6	Jan. 1 qrtly.	Market (85)	7.05%
NORTHERN TEXAS ELEC. CO. Preferred	6	Mar. 1 and Sept. 1	84	7.15%
PUGET SOUND POWER & LIGHT CO. Cumulative Preferred	6	Jan. 1 qrtly.	84	7.15%
TAMPA ELEC. CO. Capital	10	Feb. 15 qrtly.	137	7.30%
SIERRA PACIFIC ELEC. CO. Cumulative Preferred	6	Feb. 1 qrtly.	77	7.80%
SAVANNAH ELEC. & POWER CO. Debenture	8	Jan. 1 qrtly.	102	7.85%
COLUMBUS ELEC. & POWER CO. Cumulative 2nd Preferred	7	Jan. 15, qrtly.	88	7.95%
EL PASO ELEC. CO. Common	10	Mar. 1 qrtly.	125	8.00%

\*Denominations \$100, \$500, \$1000

†Denominations \$500, \$1000

‡Par \$50

Detailed information will be furnished upon request

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# STONE & WEBSTER *Journal*

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JUNG FRAU AND THE LAUTERBRUNNEN VALLEY FROM HOTEL WINDOWS AT WENGEN

# STONE & WEBSTER

## § JOURNAL §

1922

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### EDITORIAL COMMENT

#### Centralized Management

**W**HAT is it and why is it? Well, in the first place it is a natural development. We may be sure that if it is not a natural development it will not be with us very long. In a sense it may be said to be almost fortuitous, though, as a matter of fact, nothing in this universe is actually fortuitous. Things happen in accordance with the needs and exigencies of mankind. They last as long as the need and exigency last and then give place to something else. No one deliberately sat down and framed up the scheme of centralized management. The scheme was an outcome of certain necessities of certain persons, and was put into operation in a tentative fashion as the best way of handling real and urgent problems. It solved these problems so satisfactorily that it was gradually enlarged and extended. This process has been going on for several decades, and is in the nature of proceeding along the line of least resistance in the conduct of American industry, and particularly of the public utility industry.

In saying this we have perhaps answered our last question first, or at least in part. Let us, therefore, retrace our steps and ask—What is centralized management in essence? Why, simply the control or supervision of several or many industries of a fairly identical character from one and the same source. Some persons have called this objectionable. Whether it is or is not objectionable is purely a question

of fact, though the policy has been pursued long enough to bring to light, one may reasonably suppose, all the weak points that might possibly characterize it. Certain persons have from time to time enumerated what they believe to be weak points, and it may be of interest to discuss the more important of these.

Strangely enough no one seems to have said anything about what at the start might perhaps have been considered the real weak point. Very likely that was because no one then saw that the policy of centralized management could or would be carried far enough to raise the point we have in mind. It might possibly have been asked—Can centralized management be carried very far without overburdening the capacity of those having it in charge? That was a question which time alone could answer, and time has answered it in a way wholly favorable to centralized management. Whatever other objections this policy may be open to, it is entitled to a clear bill of health on this score. It has demonstrated that minds habituated to order, method and system have astonishing capacity.

Another objection occasionally voiced is that centralized management sometimes lacks ingenuousness. There is such a possibility in connection with every institution and every individual on the face of the earth. Some things have to be taken for granted. It has to be assumed that most persons are honest. That is almost an axiom of business. Business is based on that assumption. If there had not been this general assumption, industry could not and would not have been built up to its present proportions. Centralized management, like everything else in this world, may be characterized as good, bad and indifferent. In every instance it is in actual practice quickly seen whether it is good, bad or indifferent. If it is bad, it speedily breaks down and becomes a thing of the past. If it is indifferent, it lasts a little longer and then fades away. That as a whole it has lasted so long is all the proof one needs that it is good rather than bad or indifferent. Common sense tells us a few things. It tells us, for example, that in a busy, self-seeking world like this men are not going to tolerate a losing proposition very long. If they tolerate a thing for 40 years, it is because they cannot find anything better to accomplish their purpose.

Many industries of practically identical character, and

located in many and widely separated localities, are sometimes brought under specific or centralized management. Let us assume the case of a street railway or a central station in a community 1,000 miles away from the headquarters of the centralized management. A citizen of this community, who rides on the street cars or uses electric light in his house or his factory, may say (some have said), "The people who are managing our railway and our central station are draining this community of its money and spending it elsewhere." It may be natural for some persons to talk this way; in the case of everyone of us the tongue sometimes gets in ahead of the brain. Nothing could be more easily perceived than the erroneousness of this particular view of centralized management.

The money from a street railway comes from the nickels and dimes collected from the passengers. Now what, as a matter of fact, is done with this money when it is once in the treasury of the company? In the first place, more than half of it is paid out in wages and salaries, the larger part of which is spent at the local stores, the rest going perhaps into some local savings institution; none of it travels 1,000 miles to the headquarters of the centralized management. A very considerable part of what is left from the company's income goes to purchase the necessary supplies of the railway. Some of this may be spent, and undoubtedly is, among local merchants dealing in supplies. But very likely most of it may go outside the community. The necessary supplies of a street railway are not made and sold in every town in the United States, and most communities have to send far afield to secure them. In the case in hand, would more money be spent locally on supplies if the railway were owned and operated by local people? The chances are very much against this being the case. But suppose all the supplies could be bought locally, would the community be better off—would it have any reasonable ground for complaint against the centralized management? The chances are very strong indeed that if they could be bought locally they would cost more than elsewhere.

We can imagine an indignant citizen replying: "Anyhow, it would be better for us to have that money circulating among our merchants than to have it shipped out to other parts of the country." That raises a pretty question. Is it

better for a few persons in the community to deteriorate the efficiency of the street railway which serves all the people of the community? Incidentally, it may be said that the local dealers in supplies, provided there are any, will very likely, in case they make more than enough profit from their business to pay the expense of their business and pay their family bills, themselves send what they make out of the railway company to other parts of the country to pay for investments or for finery for their wives and daughters, or other luxuries. And this ignores the fact that in any event they will be very likely to send a very large part of what they make from selling to the railway to other sections in order to renew the supplies which they have to carry in connection with their own industries.

Another part of the proceeds of the railway must inevitably be paid over to the local community in the form of taxes. No more of this part will leave the community than would be the case if the railway were owned and operated by local people. Another part of the earnings of the railway must go to depreciation, and in this case no more will be likely to leave the community than if the railway were under local control.

Let us assume that part of the money necessary to build and equip the railway was secured by the sale of bonds. Part of the earnings of the railway must go to the payment of interest on these bonds. If the residents of the community were rich enough to buy the bonds, the interest will of course stay at home. But if there was not enough ready cash at home to absorb the bonds and they had to be placed elsewhere (perhaps 1,000 miles away), why of course the interest will have to go elsewhere also. The most exacting critic cannot complain of that. If anything is left over after meeting all these charges, it is distributed in the form of dividends to the people who own the stock of the railway. If the stock is owned locally the money stays at home. If it is owned abroad, the money goes abroad.

We have said nothing about one other outlet for the earnings of the railway. We refer to the compensation for the centralized management, located 1,000 miles away. We have left this feature for the last because the discussion of it brings us down to the fundamental philosophy of centralized management. In other words, it brings us to our

second question—Why is centralized management? It ought not to be hard for any intelligent citizen of any community whose utilities are under centralized management to answer this question.

Let us stick to the hypothetical case we have already been discussing. Why is the street railway managed by an organization 1,000 miles away rather than by persons who have been in the past and now are thoroughly identified with the community? How did it get into the hands or under the control of these foreigners?

This particular railway is in this particular community on sufferance. It would not be there if the community had not given it permission to be there. Why did it give it permission? Was it primarily for its own health (if we may be colloquial), or was it for the health of the people who built and equipped the road? And if the latter was the case, why was it the case? Of course it is inconceivable that it should have been the case. The community was first of all looking out for its own interests, and being tainted with human nature, it knew that it must act more or less in accordance with the interests of the persons whom it was allowing to install a street railway in its midst. There could be practically no misconception regarding the interests of all the parties involved in such a transaction. The community knew what it wanted and what it was doing, and the people who installed the railway knew what they wanted and what they were doing. And what was in the mind of each party was clearly perceived and understood by the other party.

It is a very rare person who in industry does something for nothing. It is a very rare person who could afford to do something for nothing. Everyone is out to take as well as to give. That is a law of life, the means by which the world gets on and increases its wealth and creature comforts. It is, in fact, a very foolish person who would suppose that any kind of management, either local or centralized, could be effected in a community without pay. Management must be paid for. When the community pays for the centralized management of the railway under discussion there is a very strong chance that much of the money will travel 1,000 miles to the headquarters of the centralized management. The only question is, does the community lose more than it gains by tolerating such a course?



Well, that leads up to the whole question of the general character of centralized management. But before discussing that question specifically one other aspect of the situation should be mentioned. It sometimes happens that the persons 1,000 miles away who exercise the centralized management buy into the ownership (and even buy control) of the public utility and sell the securities thus acquired here, there and everywhere outside of the locality where the property is situated. This brings us to an interesting point. Why did they buy these securities? Of course the natural answer is—they bought them to make money. They would indeed have been foolish if they had bought them without that purpose in mind.

Certainly they did not buy them in order to lose money. If the local utility company had been so financed and the road had been so economically and effectively constructed, equipped and operated that the return on the investment had been ample and the price of the securities had mounted to high figures, there would be very little incentive to outsiders to buy into the property for the purpose of making money. They could make more money elsewhere by investing their capital. A local community that can build, construct and operate a street railway with the efficiency and profit just indicated offers a minimum inducement for outside management. As a rule, outside management steps in when local management fails to accomplish the end which it or the community had in mind when the utility was created. If local capital and local management result in low efficiency rather than high, there is a possible field for outside and centralized management. The outsiders may, by reason of their greater financial resources, larger acquaintance with all the conceivable problems of public utility operation, larger and more effectually systematized and scientifically trained research and operating forces, produce economies in operation, in buying supplies, in obtaining discounts, in building up personnel, and may have facilities for raising money for new and necessary developments far in excess of the local management.

A street railway is of vital interest to a community. Any number of communities that have had them have in recent years had to give them up for want of ability to support them. The loss has been keenly felt. At least centralized

management is better than no management. A foreign-owned public utility is better than no public utility at all. A well managed foreign public utility is unquestionably better and more serviceable than a poorly managed local one.

The whole question narrows down to this. Is it economically expedient for a community to have centralized management of its public utilities, or is it not? That is purely a question of fact. In this case, as in most others, the proof of the pudding is in the eating. Any community with no more than little labor can figure out for itself which for it is the better course. The fact that so many communities in all parts of the country, both populous and reverse, both relatively rich and relatively poor, have consented to allow their public utilities to remain so many years under centralized management, is from the point of view of common sense reasoning the best evidence one could have of the desirability of centralized management.

The fact that here and there people make cynical allusions to such management proves nothing. It is and has for centuries been characteristic of Anglo-Saxons at least to growl at the institutions under which they live. But no race on earth is so slow to change its institutions. It is slow in building them up because it is prudent and cautious. Innovations have to fight for the right of entrance. The mere fact that a foothold is gained comes near being *prima facie* evidence of the desirability of the new thing or new practice.

### Through the Chinks

A CONSTANT reader has sent us a few words which he has headed "Let There Be Light." He says: "The illuminating engineers have just celebrated the fortieth anniversary of the birth of the electric light. The advance in commercial illumination since the early effort of Edison is unparalleled. I wonder what would happen if an equal advance could be made in the light possible to shed on sundry things economic and natural."

We wonder, too. It may be that the mental light of the world has increased as fast in the last 40 years as the physical light, but if so most of us have not had eyes capable of perceiving the fact. No one can say that there is as much contentment in the world as there was in the early eighties.

Since then we have enormously developed luxuries and correspondingly diminished the opportunity to save for a rainy day. We are speaking now of the average man. The fight for material existence is harder, notwithstanding the speeding up of production.

All the while science has been rapidly extending and enlarging the fields of industrial productivity. It may seem a curious phenomenon, but perhaps it is not hard to explain it. We must remember, in the first place, that the great advances in science, both theoretical and applied, have been made by select minds. The average man has had practically nothing to do with the movement.

The average man, in fact, is himself a product of applied science. The average man is not a recent achievement. He was as much in evidence in the stone age as he is today. The only difference is that the average is, in a certain sense, higher now than then. Science has been concerned, consciously or unconsciously, with bringing up the average. The man who invented the mariner's compass was a select mind, but that cannot be said of all who since then have gone down to the sea in ships. Bell was a select mind, and so was Edison. But are all those who talk business or gossip over the telephone? Or all those who turn night into day with the incandescent lamp?

Select minds have labored and average minds have entered into their labor, to use a scriptural phrase. That is, select minds, whether they intended it or not, have labored to make average minds more comfortable. So far as creature comforts are concerned, the average man of today is far better off than the average man of the stone age. The average, in this sense, is higher, but he did not make it so. He has to thank the select minds for that.

But he does not often do so. The average man is quite well satisfied with himself. He lives in a warm house instead of a miserable cave; he wears fine linen instead of loathsome animal fur; he eats wheat bread instead of viands on which it is better not to let the imagination dwell; he makes the night gala instead of slinking to a bed of rushes at sundown; he travels far afield in quest of wealth or pleasure instead of roaming a few miles with primitive implements in search of a precarious subsistence. His present mode of existence is as far removed from his primitive mode as the

South Pole is from the North. Yet he gives scant thanks to those who have made this possible.

Think of the less obvious, but highly important, ways in which the average man has been benefited by select minds. Recall Sir Thomas Gresham, who promulgated Gresham's law. How much does the average man know about Gresham's law, anyhow. That law says that a bad currency will drive a good currency out of circulation. This is mostly Greek to the average man, yet it is vital to his comfort. To ascertain this fact one need only look at Russia, Austria and Germany. Depreciated currencies have wrought untold misery to mankind.

Even foolish and degenerate persons are indebted to wise minds for the means of perpetuating their mischief. Europe and America are plastered today with Red literature. This would not be possible except for the wise minds that discovered and perfected the art of printing. Soviet propaganda is sustained by the wealth created and stored away by intelligent minds employed in productive industry, but lately sequestered by revolutionists intent on destroying what these intelligent minds created.

When revolutionists loot banks and public treasuries they have no time and no desire to recall that if those who went before them had been like themselves, there would be no banks and treasuries to loot. What a gruesome exhibition of humor we have when a Red in this country buys a bill of exchange to help the Reds of Europe tear civilization to pieces. He is employing one of the finest and most delicate products of civilization without the slightest consciousness of the ludicrous paradox in which he is involved.

Wise minds create things for the average man to use and enjoy. But the average man thinks he makes them himself. This one says, "Could these things be made if I did not help run the machinery in the mill?" And that one says, "Could they be made if I did not keep the books in the counting room." And the other one says, "How could any use be made of these things if I did not sell them on the road or over the counter?" These are all pertinent questions. But the most pertinent thing is that these various average men would be doing none of these things if select minds had not previously invented or devised the things they make and keep account of and sell, as well as all the physi-

cal and mental machinery necessary to the making, accounting and selling.

Let there be light! Edison supplied the world with a light in the use of which it is rejoicing. He did it by applying the ideas of a select mind to ordinary materials. If you look at an incandescent lamp, what do you see? Why, some metal and glass. With these things you get light, but not without certain other things. You must have a copper wire that connects you with a generating plant full of machinery. Thoughtless persons would say that the machinery creates electricity, and that this travels over the copper wire to the lamp—hence, the light. But the machinery does *not* create electricity. Nothing new was ever created since the universe was set spinning in space. You might just as well say that you create water when you pipe your house. There is no more or no less electricity afloat than there ever was. Nature has dispensed electricity with a liberal hand from the beginning of time. She would have dispensed it just as freely a million years ago by means of metal, glass, copper wire and machinery as she does today. The metal and the ingredients of the glass, copper wire and machinery were here then as plentifully as they are now. Yet the incandescent lamp is only 40 years old.

Why this delay? Simply because the select mind was not here. There is a way for doing everything, but it takes a select mind to discover the way. From the beginning of time men have eaten when hungry (provided there was anything at hand that was eatable), slept when overcome by fatigue, and sought shelter from the elements when a natural shelter was accessible. But beyond instinctively taking care of himself in these few absolutely essential particulars, the average man has done very little for himself except as taught, instigated and inspired by select minds.

"The soul's dark cottage, batter'd and decay'd,  
Lies in new light through chinks that Time has made."

Time, or experience (which is the only way we have of noting that there is such a thing as time), has throughout the ages provided certain chinks through which rays of light have penetrated the darkened intellect of humanity. In other words time has used select minds. They are the chinks of humanity.

The average man prides himself on his light. But such as he has is for the most part borrowed light; he shines by reflection. Select minds have caught a certain measure of light and he basks in its mild glow. When the average man penetrates his mind for light that is native to himself and not borrowed (and he is fond of doing this), he enters a dim twilight zone in which he gropes about, in imminent peril of life or limb.

This is the day of the average man. He is flattered in the pulpit and on the political platform, in legislature and Congress, and in the public press. Presidents and governors and public officials generally keep their ears to the ground to catch the mandates of the average man. All this is calculated to turn the head of the average man and to give him an undue sense of his capacity to regulate the affairs of this very troublesome world.

This is the case here, there and everywhere. The average man is feeling his oats. It is a wise merchant that stands in with his customers. Now, the average man is the customer of everyone who desires to mount to fame or wealth on the shoulders of his fellows. He should be on his guard against those who flatter him. An American millionaire once incautiously explained, "The public be damned," and an indignant press never allowed him to forget the episode. But what he so frankly said is no more than what many who court the favor of the average man discreetly veil.

The average man should guard against becoming a dupe. Lately the world has been in process of sending kings and emperors to the scrap heap. But democracy is not lessening the chances of the average man being duped. As a matter of fact it is increasing them—necessarily, for the greater the number of self-seekers competing for your favor, the greater the amount of lip service you will receive.

The average man never has stood on his own feet and very likely never will. Let us analyze the term "average man." A man is a man and not a god. He is not omnipotent, omniscient, or omnipresent. He is just a grain of dust impregnated with an unknown something that differentiates him from the beasts that perish—knowing not whence he came, whither he goes, or why he is here.

The word "average" implies high, low and middle. You cannot have an average unless you have both a high and

a low. So then, you cannot have an average man without having a man that is above the average and another that is below. The average man is the middle ground between the wise man and the fool.

The average man has no use for the fool—that is, when he is able to see that he is a fool. But many fools (and this is equally true of all knaves, who are but sublimated types of the fool, and who daze us by the sheer audacity of their folly), have a low animal cunning which often deceives us, and by means of which they capture the ear of the average man.

Despite all perverting influences, the average man instinctively (if not mentally) prefers the guidance of the wise mind to that of his own. But he seems increasingly unable to recognize the wise mind when he sees it. This is because of the fools and knaves who manage to get his ear. The fools dispense their folly so ingenuously and the knaves their knavery so insidiously that the average man finds it hard to retain his sense of values. He is more and more in danger of rating the fools wise and the knaves honest. The fools and knaves, in short, are giving the wise a harder and harder run.

Humanity has been undergoing a change comparable to that witnessed in the mechanical arts. Everything is now mill work. Everything tends to standardization, including the mind of man. Select minds are, so to speak, hand made, and like most hand made things are practically classed as antiquities. "Back numbers" they are beginning to be called.

What is it, after all, that distinguishes the select mind from the average mind? We should be glad if we never had to answer a harder question. There are two things: first, clearer or better trained power of observation, and, second, greater honesty in forming judgments from the facts of observation. The ability to see straight and think honestly is all that separates the wise man from the average man, or from the fool.

The average man may say, "I may be blind, but I am not dishonest." Yet how many there are who willingly or wilfully blind themselves. The old saw, "Where ignorance is bliss, 'tis folly to be wise," did not spring out of nothing. The man who first uttered it was a shrewd observer of

human nature. There are a great many things that most of us do not know (though we easily might), for the simple reason that knowledge would impose exacting burdens upon us which we desire to escape. We lay no claim to immaculate virtue, but we have no hesitation in stamping that rank dishonesty.

The average man did not frame the common law. That is the product of select minds. Yet it is an old maxim and universally accepted by the average man that "ignorance of the law excuses no man." The police regulation of every nation is based on that principle. But there are other laws than those involved in police regulation. There are, for example, the laws of physics and chemistry, ignorance of which does not excuse a man. You should not open a can of nitroglycerin with a pickaxe. Many a miner has done it, however, and no one has ever attempted to extenuate his conduct on the ground of ignorance. The miner who does such a thing is less than the average man—he is a fool. The average man has had it ingrained into him by select minds that he must not tamper with nitroglycerin.

Again, ignorance of the laws of health excuses no man. Each of us, by devoting some study to his constitution and by heeding those scientists who have made it their life work to study exhaustively the human constitution, can measurably guard against disease and physical deterioration. Many, however, through indifference, laziness or foolhardiness, remain ignorant. Their ignorance does not excuse them. They may be regarded as criminally negligent.

There are whole fields of knowledge regarding which the average man, provided he would consent to give the slightest consideration to such fields, would say, "These things are not for me. As regards such matters, I prefer to go it hit or miss." Previously, he would say, "These things are not for me. I will be governed by those whose business it is to know about them." He might be ignorant of the laws governing these things, but he could extenuate his ignorance by following the instructions of those who *did* know.

But of late he has begun to lend a loose ear to the select minds. He has begun, in short, to formulate for himself the principles on which political, economic, sociological and other vitally important affairs of life should be based, and he is doing this in response to his own inward promptings,



without adequate observation of the facts of experience and without adequate mental honesty in the use of such facts of experience as he may possess. The chinks which time has made in order to let light into his mind are being plugged up. The average man is now generating his own light. "If, therefore, the light that is in you be darkness, how great is the darkness?"

By what may seem a strange paradox, the wisest have always been meek. Moses, the greatest law giver of the ages, has been termed the meekest of men. Socrates knew that his ignorance vastly exceeded his knowledge. Meekness, in the real sense, was a characteristic of King Alfred, one of the wisest of Anglo-Saxon law givers; of Washington, whom we have fondly regarded as the father of his country; of Lincoln, whom we still hail as the savior of the Republic, and of countless others renowned for their achievements in law, science and other beneficent and upbuilding activities.

The average man, however, is losing his meekness, if he ever possessed any.

## What the Budget System Has Done\*

BY ELIOT WADSWORTH

**A**MERICANS instinctively understand a business problem whether applied to an individual, a corporation or a nation, and know that spending more than your income can only mean one thing in the end, that is, bankruptcy.

With our huge debt and high taxes, the people are forced to think more than ever before of how their Government is being managed. I believe they want and will support good business management and will drive from office those who, from lack of ability or desire, are responsible for bad management. More business in Government is not just a slogan. It is recognized by executive officers as a vital necessity for the good of the Government itself, and the good of the officers as well. An evidence of this need is the budget habit which has taken hold strongly in American public opinion. Those three figures which a budget clearly produces, namely, income, expenses and the balance, be it deficit or surplus, can be understood by everyone, for each individual has the same problem.

We all think today of deficits or surpluses in the financial accounts of nations, states and cities. It is a tremendous advance in the development of an intelligent representative government. The clear cut figures of a budget allow the voter to check up an administration in a way that can not be camouflaged. There are many other factors that go to make up the record and tend to form public opinion as to whether that record is good or bad, but in the long run, the financial results will always be taken into account by the voters, for after all the treasuries of the United States, the states and cities are simply joint purses to which we all contribute. That the money in these purses is used wisely and in moderation is a matter of personal interest to every citizen.

One of the most striking achievements of this administration is the rapid and thorough installation of a budget system. A crisis developed in our Federal purse, and, as usual, American ingenuity is meeting that crisis. By that

\*Speech of Eliot Wadsworth, Assistant Secretary of the Treasury, at annual banquet of Chamber of Commerce, Malden, Mass., October 18, 1922. Mr. Wadsworth was formerly a member of the firm of Stone & Webster.

good fortune for which this country is famous, it so happened that the new Republican Congress, almost as soon as was convenient in the spring of 1921, ended the years of discussion about a budget by enacting a budget law which has teeth and gets results. President Harding, looking for a pinch-hitter to install the budget, put in General Dawes. The tremendous importance of these events and the results which followed, can be fully understood only by those who have been in close touch with the situation.

In 1921, there was spent out of Uncle Sam's purse  $5\frac{1}{2}$  billion dollars and our income was enough to pay the bills.

When the figures for 1922 were assembled in the budget office, expenditures were figured at  $4\frac{1}{2}$  billion, with an income many hundred millions less. In those figures was our danger signal. Preparing them was the first service of our new budget, and the second service an insistent call for action.

The entire executive staff, from the President to the smallest bureau chief, attended a meeting where the facts were presented. Everyone went to work cutting costs with the result that, for the year ending June 30, 1922, actual expenses were seven hundred million dollars less than the original estimates and the Government showed a surplus instead of what threatened to be a large deficit.

Now in the current year ending next June, expenditures are estimated at  $3\frac{3}{4}$  billion dollars. The expected income is again far short. Once more executive offices and the budget bureau are cutting costs right and left, but unless new taxes are created or a great improvement in business makes present taxes more productive, we face a deficit in spite of everything that can be done.

Already the budget bureau has in hand the figures for the year beginning next July. When the appropriation bills go to Congress in December, it will be clearly shown that another deficit is in sight and Congress will act with that knowledge.

This is the crisis in our Federal purse and I wish emphatically to point out that it is the budget which has warned us of the rocks ahead and just how dangerous our position is. Without a budget, no human being could have guessed in advance what our income and expense account would look like a year and a half ahead.

For the immediate success of this new and indispensable arm of the Government, this yard stick which will impartially measure our yearly operations, the President must be given full credit. He has backed its operation with every ounce of his power and brought about a new standard in the management of Government business from which the taxpayers will benefit as long as the United States exists.

#### A BUSINESS ORGANIZATION

To reduce expenses, the Administration has done more than simply seek economy by cutting down activities. Greater efficiency in operation and better results for money spent have saved millions without sacrificing service.

There is now in Washington a business organization for the Government. The President calls it together twice a year. It is unique in Government management and has served an extraordinary purpose. Every bureau chief in every department comes to those meetings and hears from the President himself of the financial situation—just such a plan as is being adopted by big business concerns who hold meetings of their operating staffs. Last July, the President at a meeting of this organization said, "I may say frankly to you that I will not send to Congress estimates exceeding the probable receipts of the Government, and I must warn you that, unless you use your pruning knives, the executive will be compelled to cut deeply the estimates presented." That is business, and the President means every word of it. He has convinced the operating departments of that fact, not only by word but by action.

In the drive for efficiency and economy, methods and customs as old as the Government itself have been thrown into the discard. Here are a few of the steps taken to show how we are getting results.

In the Treasury alone, it was found that over 20 offices were buying supplies. In the very near future, only one office will do all the buying for the Treasury. It will be managed by experts who do nothing but purchase. It will standardize supplies, buy in large quantities, pay promptly in order to get cash discounts. In short, it will be businesslike.

In the Treasury, there were a dozen or more little stock rooms, each keeping its own shelves filled, each with a set of records more or less efficient. Shortly, there will be one

general stock room with an up-to-date system of stock keeping.

In the past, one department might be selling a surplus of material at sacrifice prices while another was buying the same material at market prices. This has been stopped. No purchase is now made without applying first to a central office which keeps a record of all surplus material available anywhere.

The Government's annual storage and rental bills run into millions. In the same city Government-owned space controlled by one department might stand empty while another department paid good money for rental space. This has been done away with by establishing a Federal real estate board. As one example of the result, scattered Government activities in Chicago were moved into Government buildings, permitting the cancellation of leases costing \$200,000 annually.

The Government's transportation bill runs as high as 80 million dollars a year, exclusive of the Post Office. A Federal Traffic Board has been created which studies the routings and nature of shipments in the interest of efficiency and cost.

In the entire history of this Government, there has never been such an improvement in routine operation as has been brought about in the last 18 months by the executive action of President Harding. We are getting towards the kind of operation which is generally expected of any large business organization.

This is only a brief, inadequate and incomplete outline of accomplishment, but it represents a great and intense effort to get the facts, to lay out new plans and put them into action, in spite of the inertia of long established methods and customs.

Going from active business into Government service, I had expected to find a calm and rather dusty atmosphere. That may have been the atmosphere before March 4, 1921, and no doubt there was some dust on the machinery of the Government. I can only say as to present conditions that it is hard to find the calm and that, while there may be dust in Washington, it is the dust that is made to fly by an active and strenuous reorganization. There is much yet to do, but at least we have the satisfaction of seeing a lot accomplished and behind us.

I doubt if any group of business men ever worked harder in their determination to get results than President Harding and his executive officers. The President has not left Washington for more than a few days at a time since he took office. He has stuck to his desk through two hot summers and never let up in his drive for economy and efficiency. The American people could look a long while without finding a more devoted and hard working group of public servants to whose hands they could entrust the business management of their affairs.

## A Family Ramble in France and Switzerland

By H. L. ROGERS

**T**HIS is not going to be a dissertation on political, financial or sociological matters. It is merely some casual notes on a more or less casual vacation trip.

We, meaning Mrs. Rogers and myself, our five children, from six to fifteen years old, Madame C— and her small boy, landed in Cherbourg early in June without any plans except our passage home and an idea that we wanted to look at Houlgate, a little town on the Channel not far from Trouville.

On looking up trains to Houlgate, we got our first taste of the difficulty of going anywhere except to Paris. "All roads lead to Paris" and connections for a trip across these radial lines are never considered. We discovered, however, a big limousine that had brought a party up from Paris to sail for New York and was returning the next day. So we chartered him and had an exceedingly interesting drive of four or five hours through a succession of farms and charming little Normandy villages.

Houlgate proved to be a very satisfactory sort of a place. In its physical characteristics it is a good deal like Trouville, but the demi-monde element is entirely lacking and it is a perfectly quiet, well behaved family resort. The beach, of course, is the feature of the town. At high tide the water comes up to a long concrete dike surmounted by a broad promenade which is backed by a string of more or less hideous villas, but at low tide it is over a mile from the dike to the water line, this mile being of firm, clean sand with occasional shallow pools and lagoons.

As soon as the falling tide uncovers ten or fifteen feet of beach, there springs up a row of beach parasols and tents, and the children begin to appear from everywhere. They come in hordes and are as sturdy, independent and well behaved a lot as can be found anywhere. As to clothes, they are very sketchy. They wear one-piece beach suits which are little more than bathing suits and choose the most vivid colors in the paint box. They dig forts and build castles, chase shrimp in the shallow pools with the curious net of the country, sail boats and get thoroughly wet and dirty and

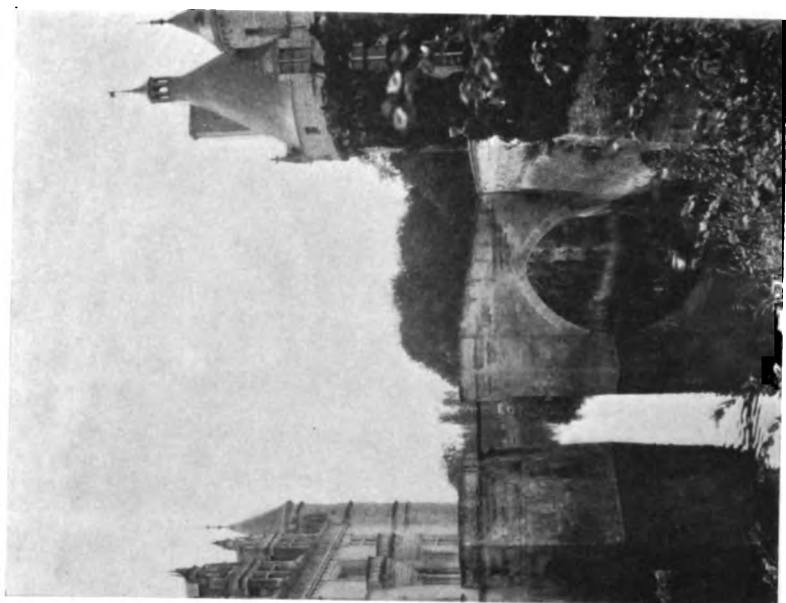


**CHAMBORD**

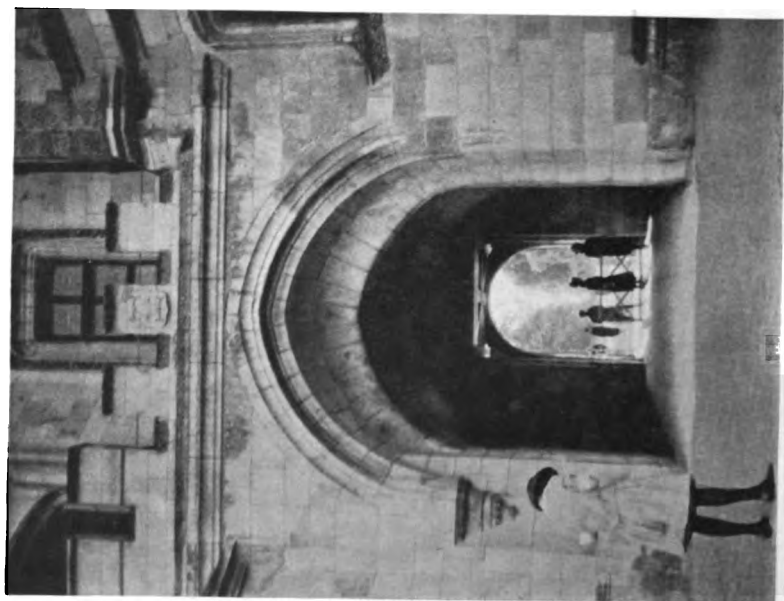


**CHENONCEAUX**





CHENONCEAUX



CHAUMONT

comfortable. The grown-ups are not much more formal, either in costume or in behavior.

We established the little ones here with Madame C— and took the older ones to Paris for three weeks of mad sight-seeing. It is hard to see any difference between Paris today and Paris before the war. It has the same feeling of spaciousness, order and an easy going people. There are just as many expensive looking jewelry shops on the Rue de la Paix as there ever were, the hotels seemed to be comfortably filled, and the theatres and the opera were doing a good business. At the fashionable resorts, like the Cafe de Madrid and Pre Catalan, the display of furs and jewels was magnificent. There seemed to be some tendency to conserve dress goods because after furs and jewels were removed there was very little left. Pre Catalan, by the way, holds the world's record in the gentle indoor sport of extracting tips from reluctant customers.

We saw all the usual things and a few unusual sights, including the annual steeple chase championship at Auteuil and an exhibition of military and trick horsemanship by the famous cavalry school of Saumur. This was particularly thrilling. After this junket we went back to Houlgate and settled down for a quiet month all together.

We found excellent horses and spent a good deal of time riding on the beach. Twenty miles east was Trouville, ten miles west was Cabourg, and all the beach between was ours.

One afternoon at low water we saw an unusual crowd way out on the beach, with more crowds on the way, so we joined the procession to see what the excitement was. We found them hunting a little fish that comes inshore for two or three days each month at a certain phase of the moon. The fish is very much like a smelt and hunts in the sand just below the water level, so the game was to get close to the water and dig up the top five or six inches of sand, throwing the fish out. If they happened to land on dry sand they could be picked up easily, but if they landed on sand covered with a little water they were gone in a flash. A whole family would hunt together. Mother might have a trowel and father might have a spading fork. They turned up the sand and all the children leaped for the fish as they were thrown up. The whole town was there with every conceivable kind of a digging utensil and every conceivable kind of a receptacle to



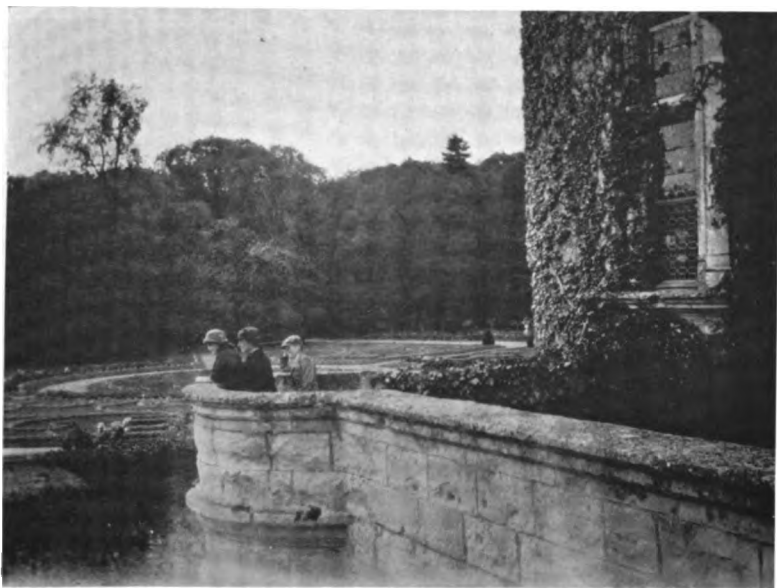
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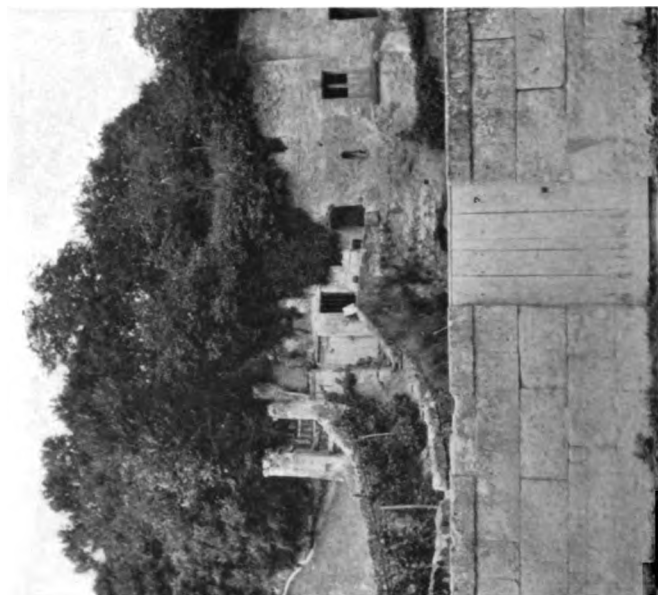
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VILLAGE NEAR AMBOISE



AZAY LE RIDEAU



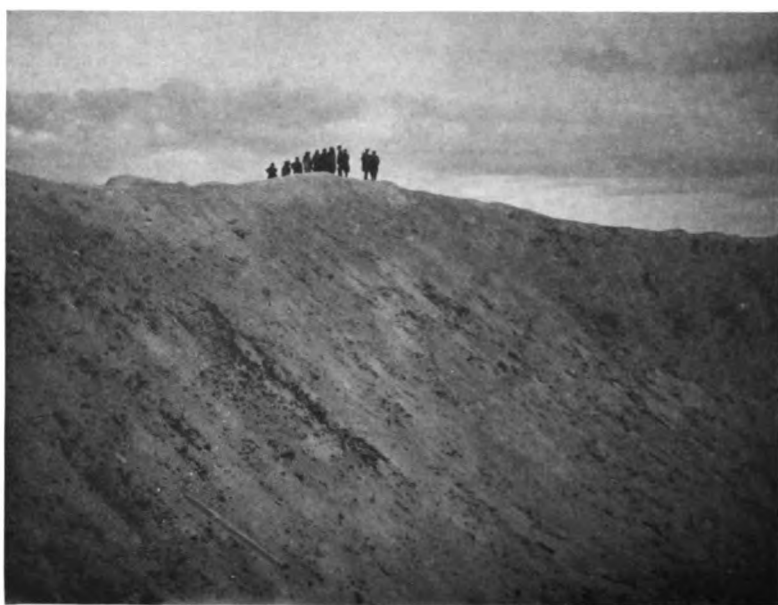
CAVE HOUSES NEAR LANGEAIS



CAVE HOUSES NEAR LANGEAIS



HILL 108



A CRATER IN HILL 108

hold the fish, from teapots to bushel baskets. Everybody shrieked and howled as the children grabbed for the fish and the excitement was so intense that dinner was forgotten and the hunt kept on until dark, which was about ten o'clock.

After this rest we took the three older children for a motor trip down through Orleans and the chateau country. The chateaux are so well known that not much remains to be said about them, so I am merely putting in two or three pictures to prove that I went there.

I was very much interested in the cave houses which are so numerous in the country south of Tours and which I had never seen described. The roads generally run through ancient river valleys, bounded by cliffs of chalk or soft limestone from twelve or fifteen to fifty or sixty feet high. This material is used for building stone in a large part of France. It can be cut with a saw and dressed with a plane, but it stands without timbering and apparently it is cheaper to dig holes in it than it is to build any other kind of a house. The Editor tells me there were troglodytes in France in prehistoric times, but most of these houses date from the Huguenot days when the Protestants, to avoid periodical slaughters, left the towns and started little colonies of cave houses in these valleys.

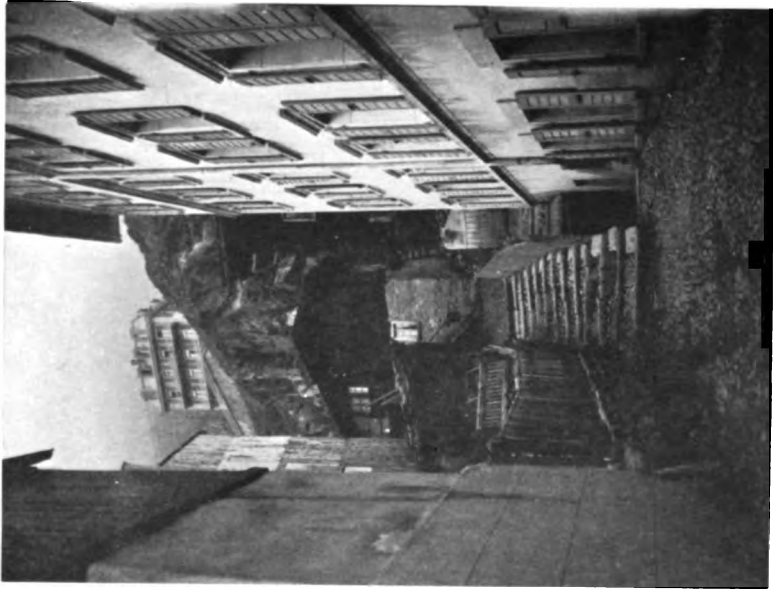
The caves are of infinite variety, from a roughly rounded hole with an approximately flat floor to store farm wagons and tools, to a two story, four or five room house.

In these larger houses a full size cave is first dug and then the front is filled in with some of the excavated stone and neatly plastered up. It is not at all unusual to see a wheat field on top of one of these low cliffs and a long row of chimneys in the wheat coming up from the houses below. The double deckers give an opportunity for the greatest ingenuity in planning stairways and little terraces for the upper deck.

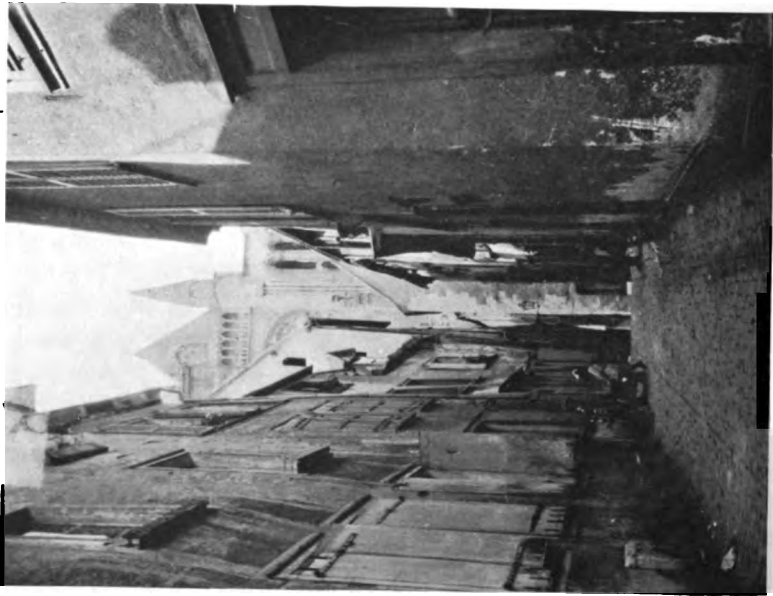
This same easy working rock enabled the builders of the old fortified chateaux, Chinon, Montrichard and Loché to sink shafts and then run tunnels out two and three miles into the country for secret entrances for messengers and foraging parties.

Another motor excursion was to that part of the battle front between Rheims and Verdun. I made this trip two years ago and was amazed this time to see how much work had been done in re-establishing roads, fields and villages.





ALLEY IN ZERMATT



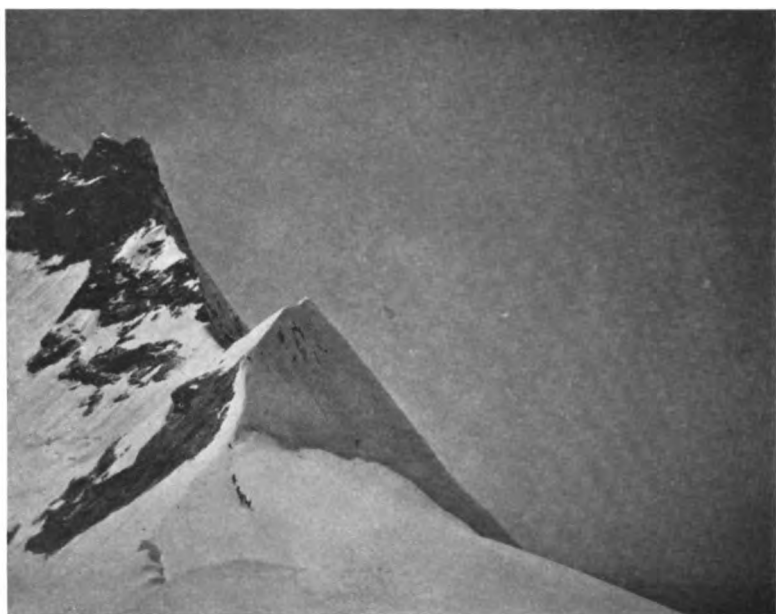
STREET IN CHATRES

The cleaning-up process is still going on and every day at 11.30 and at 4.30 a series of explosions is heard where the clean-up parties are destroying piles of "duds" and hand grenades.

Hill 108, about which so much was written in the war news, was one of the impressive sights. It changed hands a number of times and mining and countermining operations were going on continually. The sub-soil is of the same chalk and today that upturned sub-soil is absolutely bare of any kind of vegetation. No attempt has been made to level the enormous mine craters, and I believe the hill is to stay as it is as a show place. The pictures give only a faint idea of the size and depth of one of these craters.

Verdun, and particularly Fort Vaux, was tremendously impressive. The valleys back of the Fort are lined on both sides with dugouts built of every conceivable material. The fields still show the tremendous shelling to which they were subjected and the soldiers who take parties through the subterranean passages of the Fort paint the picture of the fighting in these passages in very strong colors. We were told that the French Commander of Vaux and the Belgian Commander of Liege were the only two prisoners to whom Germany gave full honors of war.

After a few more days in Paris we started on a two weeks' trip through Switzerland, through Chamonix to Zermatt, Interlaken, Lucerne, Bern and Basel. On this trip I was struck by the number and variety of the funicular railroads and the railroad engineers' contempt for grades. Cable roads and rack roads climbed up out of the valleys in all directions and up every hill. The most remarkable of these is the Jung Frau Bahn, a rack road with electric locomotives. It starts at Lauterbrunnen at elevation 2,615 and climbs out of the valley and over the mountains among rocks and glaciers to elevation 7,620. Here it plunges into the bulk of the Jung Frau range and climbs up another 4,000 feet in a five mile tunnel inside the mountain, the grade in places being 25 per cent. At two places the tunnel comes near the surface of the mountain and here great stations are excavated connecting with long observation galleries just back of the face of the cliff. Great windows open out of this gallery from which the view of the valleys and glaciers is like an aeroplane photograph. Its present terminus is inside the mountain at eleva-



ON JUNG FRAU JOCH

tion 11,390, only 2,300 feet below the summit of the mountain and well above the line of permanent snow. A tunnel leads out onto a timber observation gallery stuck on the face of a cliff and to a saddle in the range overlooking two magnificent glaciers and miles and miles of country. It gives you great respect for the tourist as a revenue producer to think that this enormous investment can be made for him alone.

After this we crossed the English Channel on a rough day with a mortality rate of 67 per cent, and had eight busy days in London and then back via Liverpool and Quebec to our several jobs and the summer was over.

## Convention Days—and Nights

**I**T is a matter for regret that the stenographic report of the Second Annual Convention of Stone & Webster Managers is not yet available for publication. The Convention, which opened on Monday, October 9, and lasted throughout the week, was instructive, stimulating and in the highest degree pleasurable. Under the guidance of the committee having the occasion in charge, the following papers were read: "Internal Relations and Welfare," by Henry A. Lemmon; "Local Securities Sales," by Charles W. Kellogg; "Simplified Rates," by A. Stuart Pratt; "The Street Railway Situation," by Charles F. W. Wetterer; "Complaints," by Henry A. Lemmon; "Our Sales Department," by Harry T. Edgar; "An Important Development in the Gas Field," by Marcy L. Sperry. Each day following the papers was an experience meeting on "The Year's Progress." This was in the form of reports by the company managers on the efforts and accomplishments resulting from the Convention of 1921. On each day also there was a luncheon at 1.30 P.M. at the City Club, at which there was singing and informal speech making.

At the Monday luncheon the speakers were Mr. Edwin S. Webster, Hon. Peter O. Knight of Tampa, Florida and the Hon. W. Cameron Forbes, formerly of the Stone & Webster organization, and not long since Governor-General of the Philippine Islands. Among the speakers on Tuesday were Mr. M. H. Aylesworth, executive secretary of the National Electric Light Association, and Mr. Howard L. Rogers. The speakers on Wednesday were Mr. Edwin S. Webster and Mr. Frederick P. Royce. On Thursday the Convention listened to Mr. George O. Muhlfeld and Dr. George Carroll Smith.

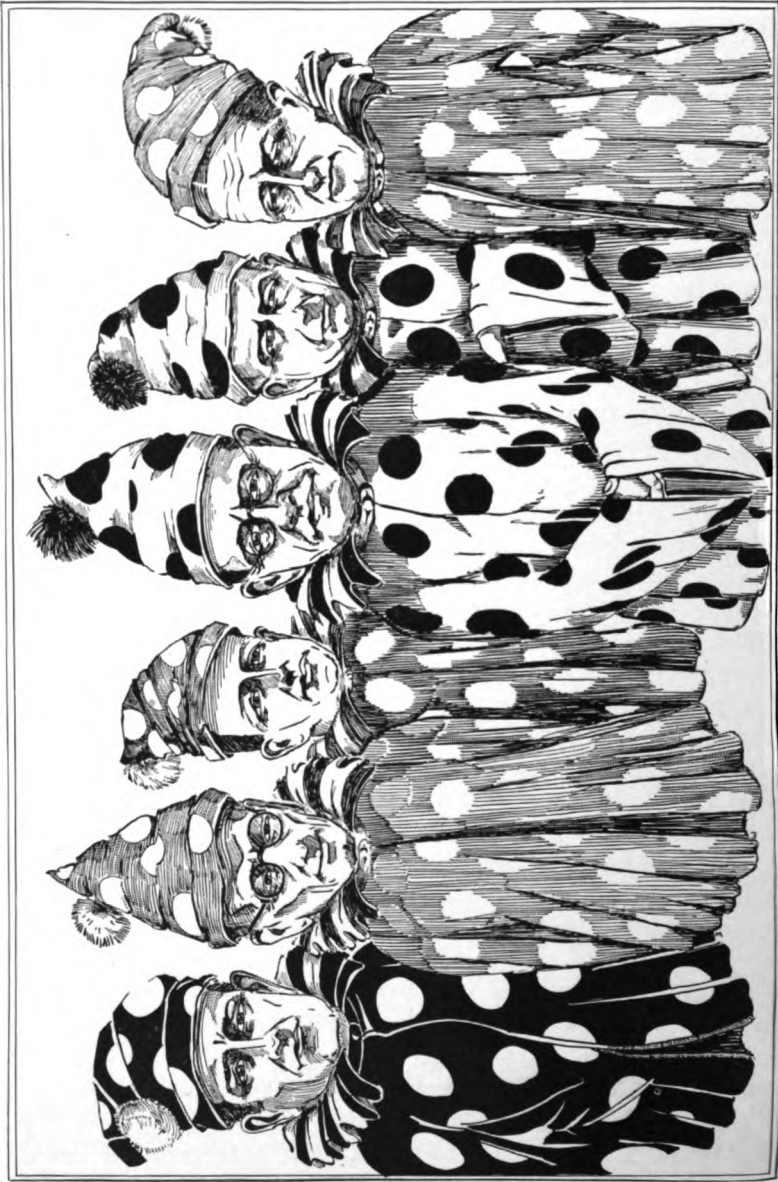
One cannot speak with too much enthusiasm of the recreational features of the Convention. On Monday night the BULLkoney CLUB provided a dinner and entertainment at the Exchange Club. Friday was spent in sports at the Belmont Spring Country Club. On Friday night the "firm" entertained the members of the Convention at dinner at the Copley Plaza.

The BULLkoneys out did themselves on Monday night. They planned a record-breaking entertainment and "put it over" without a flaw. The repast which they provided was

Lucullan, but the feast of reason and of soul was even greater. Mr. Edward F. Flynn, the president of the BULLkoney CLUB, presided and introduced the speakers. And here we must relate an amusing incident. It is not often that the friends of Colonel Flynn get one on him, but they certainly succeeded on this occasion. They searched Boston through and through until they found and purchased a bronze bull, and then negotiated with the editor of the *STONE & WEBSTER JOURNAL*, who possesses an unmerited reputation as a rhymster, to write a presentation ode. Above all, they were determined that these proceedings should not leak through to the colonel before the thing was sprung on him. Strange to say, everyone in the plot kept his mouth as tight as a vise.

After the dinner on Monday night the colonel introduced the editor of the *JOURNAL* with these words. "He has something very important to say and I trust you will give him your undivided attention." What "he" said was rather complimentary to the colonel. The situation reminds one of an incident in the life of Franklin. When Franklin was in Paris he was invited to a function at which were present some of the greatest intellects of Europe, and a number of distinguished ladies. Franklin knew very little French. Courtesy would necessitate his applauding from time to time the remarks of the speakers, which he would not be able to understand. It seemed to him that the best thing to do would be simply to follow the lead of the rest of the audience. Pretty soon there was a thunderous burst of applause, and Franklin was determined that no one should outdo him. But when he started in there was a vast amount of mirth. Alas! he discovered that the remark which had elicited his applause was a most flattering allusion to himself. Franklin could not have been more discomfited than Colonel Flynn was on the evening of Monday, October 9. If we know his friends aright, and we think we do, they will not let him hear the last of it for a long time.

Our conviction is that the professional stage lost its brightest possible ornaments when the members of the BULLkoney CLUB decided to go into the public utility business. There was jest and youthful jollity and cleverness *par excellence* the whole evening. The proceedings began with a minstrel show written by Mr. Walter H. Burke, and enacted by Mr. Burke and Mr. Marcy L. Sperry, with the



### VICTIMS OF THE BULLKONEY CLUB

*Left to right: Henry B. Sawyer, Russell Robb, Henry G. Bradlee, Harry H. Hunt, Frederick P. Royce, Edwin S. Webster.*

able assistance of six members of the "firm" who sat around in fantastic raiment, and who tried their hardest to look as if they were doing something. We present a picture of them. The reader may rest assured that the end men did not spare any of their friends.

The Southeastern Division staged a show entitled "Before and After." Their aim was to show how to make a "satisfied customer." It may be remarked parenthetically that their method bore a very strong resemblance to the tilt with which we used to delight ourselves in our youth—the satisfied customer was in inverse ratio to the dissatisfied investor.

The Northwestern Division presented a novel show, the outstanding feature of which was two extremely fine "Totem Poles," which were presented to Mr. Stone and Mr. Webster. It also "faked" a radio apparatus and a speech from Seattle, by Mr. A. W. Leonard. This last proceeding was under the guidance of Mr. H. B. Sewall of Bellingham, Washington, who, with the possible exception of the late P. T. Barnum, has had no equal in the art of humbuggery.

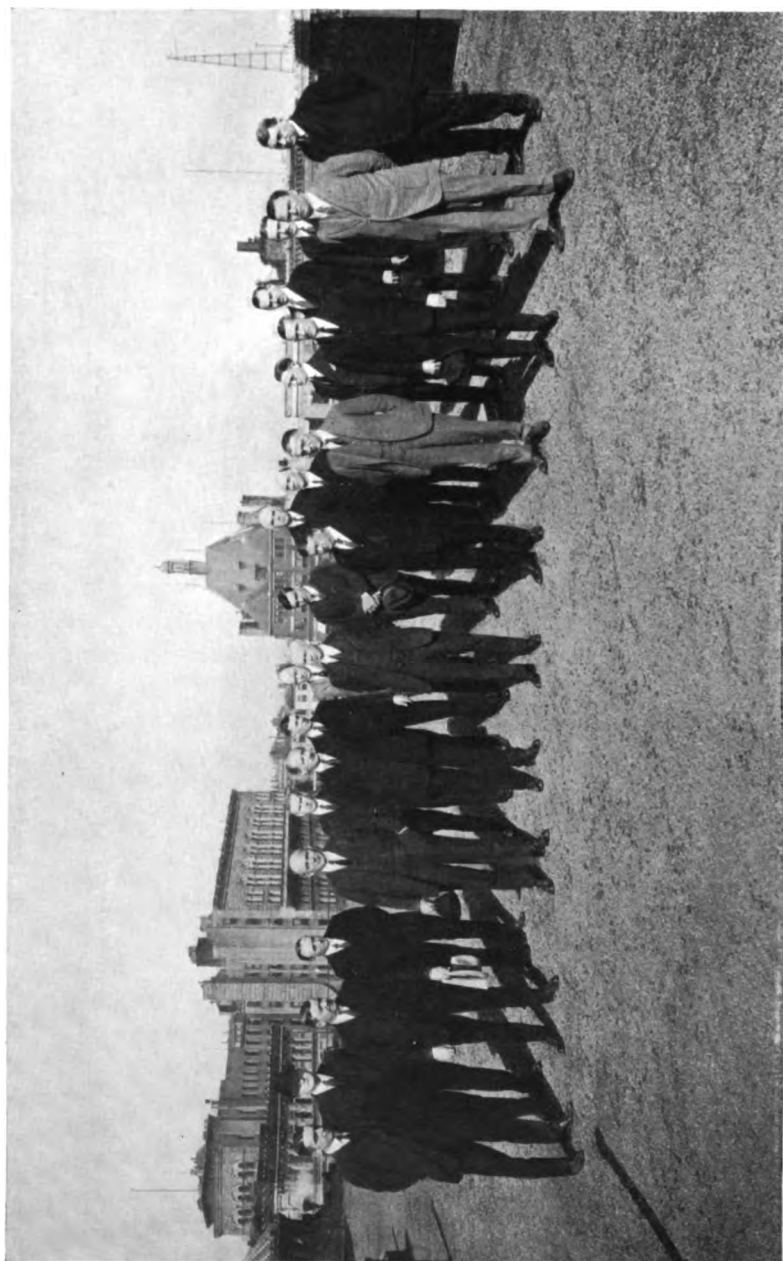
The Middle West section filled the audience with awe with a "Court of Honor." The participants were garbed and bedizened in a fashion to remind one of the psalmist's remark that he was fearfully and wonderfully made. The Middle West men threw some rather hot shots at the rest of us. They also boastfully paraded a lot of cornstalks, which were as far removed from wire-less as the North Pole from the South.

The New England section enacted "Good Old Days" in a way to make us all rejoice that "the old order changeth." They made us glad to say good-bye to the "Good Old Days."

This is the point at which a very large bouquet should be thrown at Mr. Tom P. Walker, manager of the Haverhill Gas Light Company, who acted as choir master during the whole conference. Mr. Walker has a most agreeable and well trained voice, and we have keen regret that he was not around to lead the chorus at Mr. Pat Gilmore's jubilee concerts half a century or more ago. Frankly, we have seldom known a man who could get more out of an untrained chorus. His verve was admirable. He made the singers do exactly what he wanted done.

Those who motored out to the Belmont Spring Country Club on Friday morning could not have asked for a more





#### BULLKONEY CLUB

*Front row, left to right:* Thomas J. Hanlon, Jr., Harry B. Sewall, John H. Bissell, Walter H. Burke, W. Lawrence Weston, Warren W. Loomis, Alba H. Warren, Philip I. Robinson, Claude C. Curtis.

*Back row, left to right:* Henry A. Lemmon, Alfred F. Townsend, William E. Tucker, Jefferson L. Alexander, John P. Ingle, Earle L. Milliken, Edward F. Flynn, Fred H. Farnham, Raymond G. Carroll, Ralph H. Williams, Hans Vittinghoff, Nathan H. Daniels.

beautiful day. The air crackled with life and everything was involved in sunshine. A tennis doubles tournament took place in the forenoon, from which Mr. Lawrence E. Eustis and Mr. Ralph H. Williams, both of the Boston office, emerged as victors. Silver cigarette boxes were the spoils. Forty golf players of assorted shapes and sizes trekked around the links intent on drive, approach and putt. They were competing both as individuals and as district teams. The New England team, composed of Mr. C. C. Curtis, Mr. J. J. Hunnewell and Mr. A. F. Nelson won, and will hold for a year the copper shield which is the championship emblem. Their average score of 79 was most creditable. Mr. J. M. Beal, of the Boston office, won the silver tray for the low gross score. Mr. R. A. Foss, also of the Boston office, won a silver tray for the low net score. Mr. Marcy L. Sperry, of the Boston office, who was a late finisher, won a silver cup for the high gross score, disappointing several hot contenders for this honor. A delightful buffet luncheon was served at the Club, after which numerous unofficial mental and other competitions were staged in the spacious lounge. Approximately one hundred members of the organization participated in this rural relaxation.

After the "Firm" dinner on Friday night, there was an informal but highly instructive exchange of views on the world situation conducted by Mr. Charles A. Stone. Mr. Stone talked at length and threw a great deal of light on the situation in the various European countries. Mr. Edwin S. Webster, Mr. Frederick P. Royce, Mr. F. S. Pratt and Mr. Henry B. Sawyer also recounted many interesting things from their experience in connection with foreign affairs.

As next to the last word regarding the conference, it may be said that about 20 members of the BULLkoney CLUB were photographed as a group on the roof of the Stone & Webster Building, 147 Milk Street, Boston. We have tried in the course of these remarks to avoid anything that might sound like boasting, but we are free to confess, as shown by this picture, the BULLkoneys are a collection of men that any organization might reasonably feel proud of.

The last word must be devoted to thanking Mr. Edward F. Flynn for his scrupulous and effective oversight of the details of the convention, Mr. Ralph H. Williams and Mr. J. Bertram Hayes for their journalistic perspicacity in

editing the *Iceberger*, Mr. Edward S. Roberts for clashing the ivory with such vigor and charm, and Mr. Carl E. Weber, Jr. for sketching from memory the six members of the firm in the minstrel show—it was a difficult feat, and though it does not prove Mr. Weber's fitness for the green goods business, it shows that our confidence was not misplaced in sending out to him a hurried and belated call for assistance.

## Engineering and Construction Activities

### **The Edison Electric Illuminating Company of Boston to Build a Power Station with an Ultimate Capacity of 300,000 Kilowatts**

**M**R. C. L. EDGAR, president of the Edison Electric Illuminating Company of Boston, Mass., has announced the decision of his company to proceed immediately with the construction of its new generating station at Weymouth, so as to have it ready for regular service by the autumn of 1924.

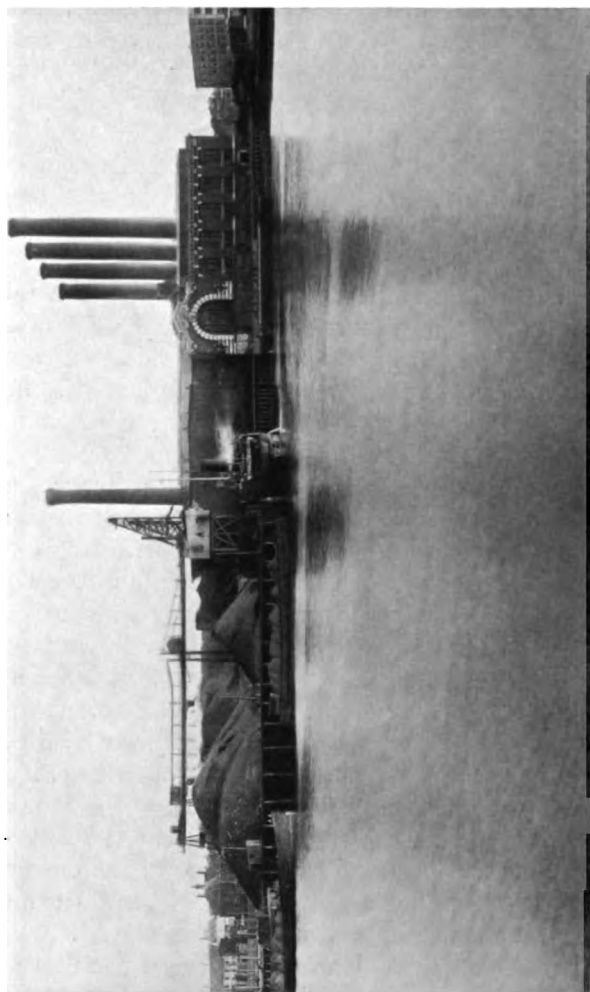
The work will be under the direct supervision of Mr. I. E. Moulthrop, of the Edison Company, and Stone & Webster, Inc., has been engaged to design and build the plant in collaboration with the company's engineers.

The history of electric lighting in Boston dates from 1878, when a six light arc dynamo was installed in a clothing house. Five of the lamps operated by this dynamo were used to illuminate the interior of the store, and the remaining lamp was hung from a crane over the sidewalk for exterior illumination.

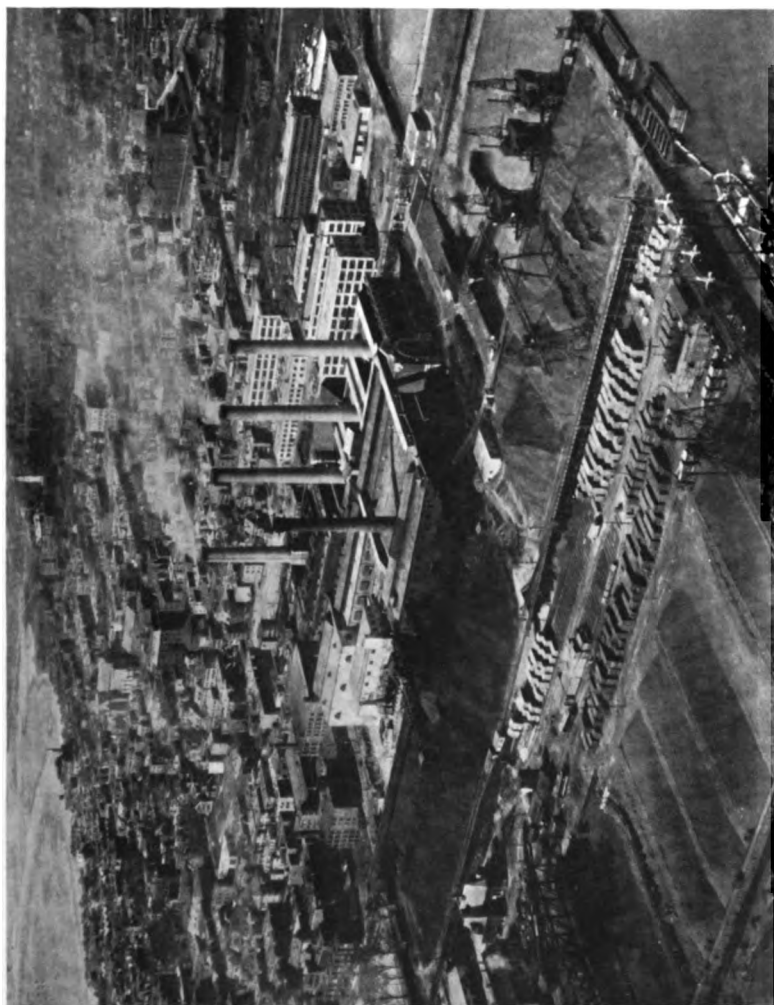
The Edison Electric Illuminating Company was organized in 1885, with a capital of \$100,000, which included the payment of \$35,000 to the Edison Electric Light Company, the parent company, for license rights under the Edison patents. These rights entitled the company to use the system and apparatus, including the first incandescent lamps of commercial value, perfected by Thomas A. Edison. The present capitalization is more than \$27,000,000.

The first station was put in service in February, 1886, with the Bijou Theatre as its first customer. It is an interesting fact that Mr. Edison personally officiated at the station during the evening of this date. Seated beside the generator rheostat, he regulated the voltage of the current used at the theatre, a signal bell being used as a warning when any sudden change in load was contemplated.

This station in Boston was one of the first stations in the world supplying any considerable amount of electricity for motive power. Previous to this time there is no record of more than a few motors being operated from a single plant, while the Boston station, in the latter part of 1887, was supplying current for 92 motors, with an aggregate of 225 kilowatts. The new plant about to be built will have an ultimate capacity of more than 300,000 kilowatts.



EDISON ELECTRIC ILLUMINATING COMPANY'S L STREET, SOUTH BOSTON, MAIN GENERATING STATION



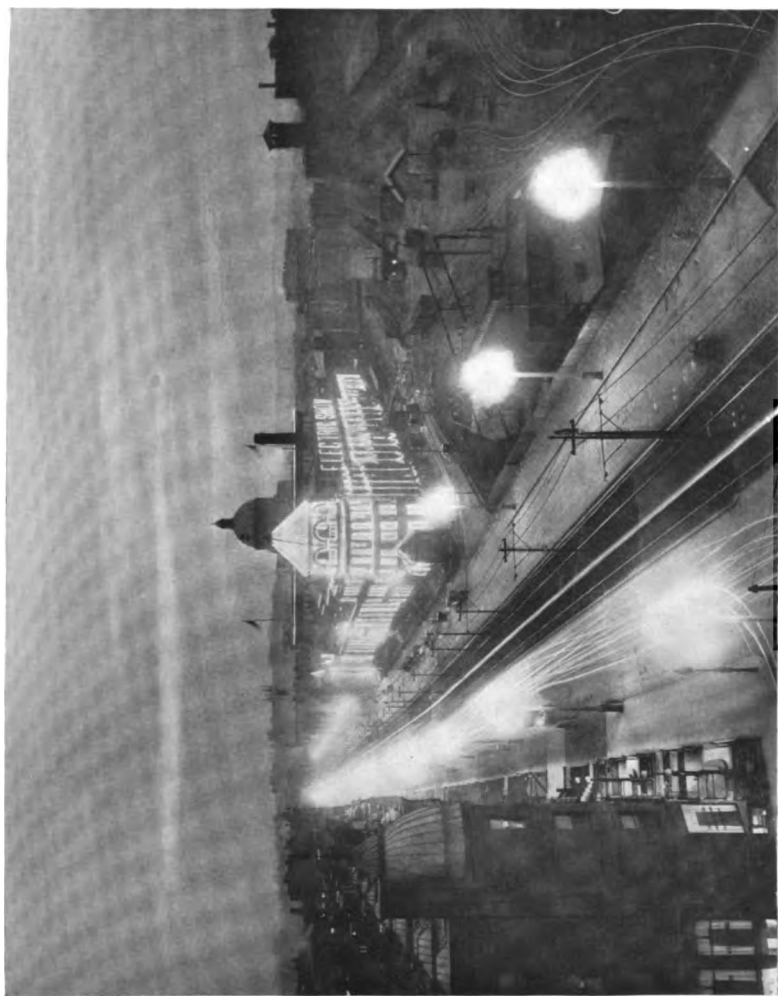
AEROPLANE VIEW OF THE L STREET STATION OF THE EDISON ELECTRIC ILLUMINATING COMPANY OF BOSTON

The company is at present installing a 30,000 kilowatt unit at its L Street station in South Boston. This will bring that plant up to 186,000 kilowatts generating capacity, and will so fill it that further expansion will not be possible at this site without making radical changes. For this reason it was decided to build an entirely new plant to provide for future growth.

After a careful examination of all the available sites, a location was chosen on the Fore River at Weymouth. It is about two miles from the harbor at tide water and is reached by ship channel, unobstructed by bridges, with a minimum depth of 25 feet. For this reason coal from Newport News can be delivered by ship or barge directly to the storage pile. In addition to convenient water transportation, it can be easily reached by a short spur from the South Shore branch of the New York, New Haven & Hartford Railroad.

The company is at present supplying Weymouth and the adjacent city of Quincy with their electrical energy, and the main cables which pass by the new site will conveniently serve as an initial tie line between the new plant and the L Street station, eight miles distant. It will also be easy to take energy from this plant for any electrification scheme of the steam railways or to tie into the proposed super power line recommended by W. S. Murray in his report on the subject to the United States Government. It is in a locality that gives every indication of rapidly becoming a large industrial centre, as it is the nearest point to the business centre of Boston from the south, where deep water vessels can conveniently dock. It has already attracted many large companies, such as the refining plant of the New England Oil Company, the steam generating plant of the Eastern Massachusetts Street Railway Company, the Fore River plant of the Bethlehem Shipbuilding Corporation and numerous others.

The property when filled to the bulkhead lines established by the Government will consist of about 60 acres. The plans will be prepared for a station that will ultimately have a capacity of approximately 300,000 kilowatts, together with the necessary outdoor switching, transformer stations, administration buildings, etc., and storage capacity for at least 300,000 tons of coal. Tentative preliminary plans have been based upon an initial installation of two 30,000



THE BOSTON ELECTRIC SHOW



kilowatt, 60 cycle turbines with boiler plant sufficient for one unit. It is by no means improbable however that the first installation may be considerably larger.

#### **New Unit for Hartford Electric Light Company**

Stone & Webster, Inc. have been authorized by the Hartford Electric Light Company of Hartford, Connecticut, to install an additional 20,000 kilowatt unit in their South Meadows Station. This is the station which we completed in 1921, and is designed for an ultimate capacity of 130,000 kilowatt. The construction personnel has not yet been assigned. It is interesting to note that this company which was incorporated in 1881, was the first public service company to install a steam turbine for the generation of power and that at present it is again acting as a pioneer by installing the first mercury vapor plant for the generation of commercial electric power.

#### **Wenatchee Valley to Receive Puget Sound Power**

The Puget Sound Power & Light Company has engaged Stone & Webster, Inc., to design and construct a transmission line 120 miles long, which will connect their system with the fertile Wenatchee Valley, the home of the Skookum apple.

The line starts about 20 miles from Seattle at the White River plant, which was built in 1911 and which is the centre of the Puget Sound Company's distribution system. To reach the Wenatchee district of the Columbia River Valley, the line will have to cross the Cascade and the Wenatchee mountain ranges, at elevations from 3,500 to 5,000 feet respectively.

In order to deliver power before the apple harvest begins in July, 1923, it was found to be necessary to complete the mountain sections before the winter, as snow accumulates in the mountains from 15 to 20 feet deep and snow slides are of frequent occurrence.

Surveys were started on June 15, and in two months all of the 120 miles of right-of-way had been cleared. Some 400 men are working out of 16 camps and it now seems certain that the race with the snows this winter will be won.

The work is under the supervision of S. L. Shuffleton, western manager, with Wm. D. Shannon, superintendent of construction.



**THE LINE CROSSING THE CASCADE RANGE**  
Where snow collects twenty feet deep



**WHERE THE CABLES CROSS THE COLUMBIA RIVER**

It was a source of satisfaction to both Mr. Shuffleton and Mr. Shannon that as soon as the work became known, many of the men who had worked with them on the Caribou hydro-electric project in California left other jobs and paid their own way to Washington in order to get back with our organization.

**To Study Recent European Steam Station Progress**

Mr. E. B. Powell of the Division of Engineering and Construction sailed for Europe on October 28. He will investigate recent European progress in steam power station practice, and will be gone about two months.

## Developing the Industrial Use of Gas

BY H. VITTINGHOFF

IN approaching this subject it may be of interest to introduce it by glancing at the general statistics pertaining to the gas industry. A careful analysis of all the available figures seems to indicate that the manufactured gas in the United States, as distinguished from natural gas, is used for various purposes in the following proportions:

Illumination	21%
Domestic Uses, other than Illumination	54%
Industrial and Unclassified	25%
Total—	100%

Some twelve years ago, a similar compilation showed that the gas manufactured and sold in 1910 was distributed as follows:

Illumination	45%
Domestic Uses, other than Illumination	50%
Industrial and Unclassified	5%
Total—	100%

These figures clearly indicate how much more important the industrial gas load has become.

I now wish to draw your attention to the chart illustrating the growth of the gas business since the beginning of the century. Starting with an output of about one hundred billion cubic feet, we see that the two hundred billion mark was reached in 1914 and the three hundred billion mark in 1919. These figures show that the industry grew at the rate of approximately seven per cent per year, and the form of the curve indicates that the increase was very much greater during the last six years than it was during the preceding fourteen years. This is, of course, what might be expected in view of the enormous industrial expansion which this country experienced during the war years. Many manufacturing plants had to expand very rapidly and those which had to use fuel in some form or other found gas most convenient and most readily available, and therefore selected it, irrespective of its cost.

We have now reached the point when the manufacturer

must stabilize his industry and if he wants to continue in business, must use every effort to reduce his production costs. He must search for economies and the gas industry will undoubtedly lose a large portion of its present load if it cannot show to the manufacturer that it is economical as well as convenient to use gas for industrial fuel. It appears to me therefore, that it would be foolishly sanguine to assume that the slope of the output curve during the next few years will continue at the same steep angle, which it assumed during the years 1914-1920, unless the industry makes an effort to promote the sale of gas for industrial fuel by meeting the fundamental requirement of the consumer.

All industrial gas business can be divided into two classes, non-competitive and competitive. A large proportion of the business which the industry now has is of the former class and consists mostly of the industrial business in which the cost of the fuel is outbalanced by far by the contingent benefits derived from it. All such business as restaurant ranges, candy furnaces, small industrial furnaces, etc., is in the non-competitive class and is business which the industry will probably retain regardless of the high cost of gas in comparison with other fuels. Never fear that you will soon be able to boast that all the pop-corn and all the peanuts in your town are roasted by gas. This business you are bound to get sooner or later. Nevertheless, an effort should be made to get it as soon as possible, because it will always be very profitable, much more so than the small domestic business which is so often the only reward we now get from the most strenuous sales efforts on our part.

However, this is not the business upon which depends the ultimate growth of the industry. The real industrial gas business which we are after is not of this order but is distinctly in the competitive class. The business we must go after is that of the manufacturer using fuel for industrial purposes.

In times gone by many users of fuel were opposed to the use of gas because they lacked experience in its application. This phase is long past and a great many manufacturers are perfectly willing to admit that gas fuel, in some form or other, is most suitable for their purposes. Intensive methods of production very often require the substitution of gas for solid or liquid fuels, as thereby the output of existing

apparatus can frequently be increased and at the same time the quality of the product improved. The only obstacle in the way of the use of central station gas by the manufacturers is the cost of it as compared to solid or liquid fuels, producer gas, or some other form of gas made in an isolated plant.

There is no doubt but that the isolated gas plant is a real menace to the gas company in industrial communities, just as the isolated plant was a menace some years ago to the electric industry. It is, of course, true that the gas industry has some advantage in the situation which was not enjoyed by the electric central station. The production of gas is a very complicated chemical process and will not be entered into so readily by the manufacturer as the operation of an electric generating system which involved in a great many cases only the installation of generating equipment, since the boiler plant was frequently available and ready to serve as the source of energy for the new motive power. The operation of an electric generator did not present any serious difficulties to the operating organization of a manufacturing establishment originally driven by steam power, where as the generation of gas would necessitate that the manufacturer obtain men thoroughly versed in carrying out the complicated processes required. At present, the danger of the isolated plant seems remote, but still, there is a cloud in our particular sky. Just remember that out of the Indians' fire-stick, operated laboriously with a bow and string, was finally evolved the safety match. Who can vouch that in the future some more simplified gas producing process may not be developed. Anyhow, it would be poor policy to build up our industry on the other man's weakness, rather than on our own strength.

The real foundation of the industrial gas business is the rate which we charge for gas. This rate must be such that we can compete in cost with all other fuels, taking of course into consideration all factors, such as increased production, better quality of the product, lessened labor costs, and greater convenience.

It is obvious of course, that the rate at which we sell gas for industrial fuel purposes must be materially lower than the rate at which we sell gas for domestic purposes. This is so not only because the traffic would not bear the higher rate,

but also because the cost of service to us for furnishing gas for industrial purposes is bound to be materially less than the cost of service per thousand cubic feet which we furnish our domestic customers. This factor is important, but still not so vital as the element which after all governs all price levels: the factor which no business can escape—that the charge for service rendered must not be greater than the traffic will bear.

Just what the traffic will bear in the case of the industrial gas business is something that it would be difficult to determine definitely for the industry as a whole. Apparently the central station electric man finds it necessary to establish an industrial rate bearing a ratio of one to four to the domestic rate at which he sells electric service. In arriving at this general result the electric man was unshackled by precedent, and at least in the earlier years free to establish rates at levels which suited him without interference from governmental control. Tons of paper have been covered with print to show how unfair electric rates are, how utterly illogical, how through them Peter is robbed to pay Paul, and yet when all is said and done, the industry thrives marvelously, and has not much cause to repent of its alleged sins in rate making.

I do not believe that it will be necessary to establish any such ratio as one to four between the industrial and domestic gas rates. This seems hardly necessary in view of the fact that domestic gas rates, as measured by such standards as are available, are materially lower than domestic electric rates. For instance, judging on the basis of candle power hours, the gas company selling gas at a \$1.00 will deliver three times as much light as the electric company selling electric service at 10 cents per kilowatt hour.

Suppose we assume that it would be necessary to establish a ratio of two to one between domestic and industrial gas rates. This would mean that if a company sold gas at \$1.20 to its domestic customers, it would have to sell gas at 60 cents to its industrial customers. Such a rate would probably obtain a very large amount of industrial fuel gas business, but still it probably would prove difficult for most companies at present, at least, to make both ends meet on such a rate.

It is, of course, generally admitted that the small domestic customer is more of a liability than an asset to the company,

and, therefore, the obvious solution would be to raise domestic rates in order to enable the company to take on such industrial gas business as is available in the territory served by them. The industrial fuel sales committee of the American Gas Association urges upon the members to bend every effort towards that goal. They recommend that gas companies all over the country with the co-operation of the national organization, the American Gas Association, urge upon commissions to authorize such a change. To quote from the report:

“Such a policy is not unreasonable. In supplying the domestic customer, the gas company only performs a part of its function. In supplying the industries of a community with a fuel which will facilitate production and lower costs, the gas company is serving not only the industry but also that community and all its people. By supplying not only the domestic needs but also the industrial requirements, the central station can best serve the people and thereby be of maximum utility to the community.”

It appears to me that there is a fallacy in this argument. The gas company wishes to be enabled to charge higher rates for domestic service in order to compete with coal, oil, etc., in the industrial field. Fundamentally it does not intend to lower the cost to the manufacturer by giving him a fuel cheaper than coal or oil, but merely wants to be given a chance to obtain more business. It, therefore, appears that the industries of a community would not be materially assisted by such a change but only a single industry, the central station gas plant, which after all represents only a very small part of the total industrial investment in any given community. To help out this single unit, with its few stockholders, largely non-resident, the great mass of the population is asked to contribute. Such a procedure may be entirely logical when considered from the point of view of abstract justice, but it is hardly practical. I venture to say that State Commissions will present a solid front against such a policy.

Fortunately, we face an era of declining prices. Many companies are already giving serious consideration to reducing their rates in order to let their customers have the



benefit of reduced production costs due to lower costs of raw material. These are now at the favorable point where they can establish a rate which will enable them to take on an industrial fuel load. Reducing the cost for the benefit of the large consumer, without at the same time benefiting the small consumer, is decidedly not as popular a move as to hand over all the benefits of lowered costs to our domestic customers. In spite of this obvious fact, we must not be stampeded into the easiest way, but must remember the ultimate great good that can be accomplished for all concerned by taking the opportunity now presented to the industry of taking on, by the establishment of proper rates, the industrial gas business which will insure to the industry a continued healthy growth. Several commissions have already expressed themselves to the effect that they realize that the industrial business is the salvation of the gas industry, and while they would object to an increase of domestic rates on the ground of public policy, they would probably support a postponement of a general reduction in rates in order that the industry may secure a sound footing in the industrial field.

With a view to determining what would happen to the earnings of a company under our management, operating in a territory largely industrial, if we established a rate which would enable that company to get material amounts of industrial business, we analyzed the situation for a typical average month. The rate which we applied took the following form:

1st to	10,000	cubic feet	per month	1.15
10,000 "	30,000	" "	" "	1.05
30,000 "	100,000	" "	" "	.85
100,000 "	200,000	" "	" "	.70
Over	200,000	" "	" "	.60

The present net rate charged by that company is 1.15 per thousand cubic feet.

Comparing the earnings from the new rate with those obtained from the old rate, it was found that had the new rate been established, the company would have sustained a loss of only \$1,300 during the month, equivalent to an average reduction of 1.9 cents per thousand cubic feet sold. That particular company had estimated that it could afford to

make a reduction of 4 cents per thousand cubic feet in order to let its customers partake in the benefits derived from lowered production costs. A reduction in the rate of such a small amount would have pleased no one in particular and certainly would not have given the company any material amount of new business. The step rate as proposed on the other hand, would undoubtedly have enabled it to obtain a good proportion of the industrial fuel business available in its territory, and have enabled it to take the first step toward insuring its future, by giving it an opportunity to continue its growth.

At first glance, the trifling effect which the radical reductions embodied in the new rate had on net earnings may appear astonishing, but on further consideration it is plain that the cause is to be found in the fact that the industrial gas business now obtained in that particular community is, after all, only a contemptibly little insignificant business. The reason why the proposed large reduction in the rate for industrial gas business causes so little disturbance in the earnings is that we have practically no industrial gas business.

Assuming that we have established a rate on which the industrial gas business in the competitive class can be got, let us consider now ways and means of finding it and taking it on.

In a general way the activities of the industrial salesmen in the electric and gas fields can be summarized by stating that in the former line, power is sold and in the latter heat. Power is utilized through motors which must conform to conditions of service prescribed by the central station. With few exceptions local conditions in a manufacturing plant make it necessary to give consideration to only a single limitation — size. The gas man selling heating appliances is not limited by the type of service given by his company in the way that the electric man is; but on the other hand he is very much handicapped by the limitations put on him by the local conditions existing in a manufacturing plant. True, he sells only heat, but the application of this form of energy takes thousands of forms. He may have to deliver a given number of heat units per hour, either in the form of a gently heated atmosphere for a large drying oven or he may have to deliver the same number of heat units per hour in order to maintain the very high temperatures necessary for melting

copper. The manufacturer may require that the articles to be produced must be exposed to either an oxidizing or a reducing atmosphere, or he may require that the process be carried on in a neutral medium.

At first at least, each installation will appear to the industrial fuel salesman as a comparatively unique problem. The salesman will usually find that the consumer may know what he wants to accomplish but rarely knows how to do it with gas. The salesman will therefore often have to act as a missionary and teacher. Up to now the consumers of fuel gas have dealt almost always directly with the manufacturer of gas appliances. The most that many gas companies have done is to show a kindly, but superficial interest. The manufacturer of gas appliances unsupported by the gas company has had to stand the cost of developing all new appliances and has had to absorb this expense. Unfortunately the competition among appliance manufacturers has been severe and the matter of producing their goods at a minimum cost has been necessarily a matter of vital interest to them. It was absolutely necessary for them to turn out their goods as cheaply as possible, and as the cost of development of new appliances could be spread by any one manufacturer over only a limited output, naturally no large amount of development work was done. In the electric field we have the two great manufacturers, the General Electric Company and the Westinghouse Company, both of which maintain research laboratories with a thoroughly competent scientific staff. The volume of their business is so great, the amount of standard goods turned out by them so enormous, that the cost of maintaining a research department, considerable though it may be, is only a trifling matter when spread over the selling cost of all the goods turned out by them. In the gas field, we have no appliance manufacturers which in any way compare with these two enormous corporations. The volume of business done by each gas appliance producer is small and specialized, and but few of them can afford to make any pretense of maintaining a research staff. Such is the present state of affairs.

The gas industry—considering it for the moment to include the producer of gas and the manufacturer of gas-using appliances—has lagged far behind in scientific development, and in order to catch up in the race, especially in the race

for the industrial heating business, some more or less radical steps must be taken. I propose that we subsidize the manufacturer of appliances. By this I do not mean that we should build up a fund and hand it over to some manufacturer or other to use for developing his appliances, although even this might be desirable under certain circumstances. Nevertheless, we should make up our minds to provide for generous appropriations to do investigating work by which would be benefited not only our consumers and ourselves, but also the manufacturer of appliances. We should assist to our utmost ability every effort of the American Gas Association to gather data on appliance installations made and their performances, and should encourage in every way the activities of our national association to promote the industrial fuel business by stimulating the manufacture of appliances to turn out goods designed on a scientific basis.

The problem of finding and taking on the industrial fuel gas business cannot be solved by a simple formula, except up to a certain point, which is far short of the ultimate solution. Only a single fundamental can be laid down:

“Every business which requires heat in some form or other is a possible prospect.”

In making an effort to take on this new line of work I would recommend to the companies under our management that as a first step they make up from a classified city directory a list showing the names of every concern in their territories which can, even by a long stretch of the imagination, be called a manufacturing concern. A detailed examination of this list will disclose certain perfectly obvious prospects. To assist you in discovering these I recommend that you obtain from the American Gas Association a little booklet entitled, “A Thousand Uses for Gas.” Of course, these thousand uses are really only a thousand different applications of heat. The book is no panacea, but may help to direct the search for prospects. After a list of respectable dimensions covering the most likely prospects has been drawn up, each of them should be visited and the possibility of gas for industrial fuel discussed with those men directing the particular business who are most likely to be interested. Sometimes this may be the president of the concern, at other times it may be easier to interest the manager or superintendent.

Detail for this work the best man whom you can find and arrange to have him use all his time to make a most careful study of the various processes of manufacture, the requirements for heat, and above all the present costs of operation with the fuel which you hope to replace by gas. Have this man study the technical journals pertaining to these industries. It is astonishing but true that the number of things which we know about the other man's business, which are not so at all are only equalled by the problems which he has to meet, and of which we have no conception. Make use of the services which the American Gas Association is able and willing to give our industry to help it get the industrial gas business, and take up your problems with the more progressive manufacturers of appliances. Even go to the length of making experimental installations, furnish gas appliances for trial periods, make up your mind to the fact that if you want this business you will have to help pay for the development of it and cannot, as heretofore, make your customer or the appliance manufacturer alone hold the bag.

I believe that it is of vital importance to make thorough technical investigations of the processes carried on by manufacturers in your territory whom you consider prospects for an industrial gas load, not because you want to impress the manufacturers that you know more about their business than they do, but because you must show them that you know more about the application of heat in the processes as carried on by them than they ever thought of.

I do not urge leaving the selling of the service to the technician, but merely wish to point out that the salesman should listen to him before he attempts to sell, so that he may thoroughly understand the problem, and not attempt to sell gas purely on the basis of "atmosphere." I have been informed by a man who is an important factor in the development of water powers in New England, that many thousands of kilowatts have been sold purely on the basis of the scenic effect of a hydro-electric development. A gas plant is not particularly picturesque, and since, like the poor, it is always with us, it probably does not offer much of an enchantment to the prospective user of fuel gas.

Remember that we must use every effort to get the industrial gas business. The development of our industry depends to a very large extent on it. Further, we must get it

now. Remember that we are in competition not only with coal and oil and producer gas, but also with electricity. This last competitor, whatever the merits of his claims are, is a most active one. He certainly does not hesitate to proclaim the advantages of electric service from the house-tops. We know of course, and can easily demonstrate, that one kilowatt hour is equivalent of 3,415 b.t.u. and that this quantity of heat is contained in 6.45 cubic feet of 530 b.t.u. gas. From this, simple arithmetic will derive the uncontrovertible conclusion that it is necessary to establish a rate of one-half cent per kilowatt hour to equal a gas rate of eighty cents per thousand cubic feet. We also know that the overall efficiency of electric appliances (though higher, generally speaking, than that of gas appliances), is not sufficiently greater to offset the difference between a reasonable industrial gas rate and the average power rate. This is comforting knowledge of course—to keep in the back of our heads. Certainly it is not fit material to spread over a full page advertisement. At least I doubt if many readers would be particularly interested in this sort of information. We can also prove that we can deliver one thousand candle power hours for one-third the cost at which it can be furnished electrically. A thoroughly enthusiastic gas man can wax quite eloquent over the superior merits of the softly diffused light from a Welsbach mantle which so closely approximates the light of day. But—the light business is lost to us, or at least it has been absolutely stationary during the past ten years. We have taken the case to the highest Court of Appeal, “Public Opinion,” and the decision went against us. All further argument is futile.

But because the decision went against us in the lighting case is no reason why our industry should surrender to the electric central station in the heating case. A man in considering his business affairs rather than domestic matters, is more inclined to sharpen his pencil and decide the matter in cold blood on the basis of dollars and cents and is not so inclined to pay an extravagant price for mere simplicity and convenience. However, in presenting our arguments to him we must use language with which he is familiar and present our cost figures on the basis of his units of production wherever that is possible. It is of course needless to say that we must take every opportunity to urge the superior merits of

our heating medium and must endeavor to demonstrate the collateral advantages of using our service, as for instance, superior quality of output, greater uniformity of product, increased capacity of the plant already installed, etc.

The final step necessary to obtain a substantial industrial gas load and carry it with profit is dependent on lower production costs. There is still a wide opportunity for this but to go into details of this phase of the problem is beyond the scope of this paper. Suffice it to say that improvement along this line will probably take the form of the development and perfection of a system of complete gasification of coal. By this is meant the conversion of bituminous coal into gas without any residuals, except a little ammonia and tar, and without the addition of enrichers such as gas oil. The development of this idea is being carefully considered by many competent gas engineers and the desired goal, though not in our grasp as yet, is no longer to be considered unapproachable. It is true that we are still so far from the solution of this part of the problem that we cannot afford to let it have any weight on the policy which we should now adopt to get a substantial part of the whole available industrial fuel business. But, there is one phase of it which may be of interest. Many prospective users of fuel gas are already customers of our gas companies in so far as they purchase coke. There should not be the slightest hesitancy on our part to give them up as coke customers, if thereby we can take them on as gas customers; we need not fear any loss in revenue from such a step. If we get a certain income from the sales of coke, the revenue we should derive from gas sold to perform the same service will be greater by at least the proportion that the utilization efficiency of gas bears to that of coke. This is the absolute minimum. In actual fact the increase would be greater, because we would include in our rate other charges justified by the collateral advantages offered by gaseous fuel. It is true that the coke released would be greater than that needed to make gas to yield an equivalent service, but such excess can be sold for other purposes, for instance, domestic heating, which is a load that our gas companies would not care to take on in any material amounts because it is seasonal in character and therefore has a very poor load factor.

To sum up then, to obtain the industrial gas business we must:

1. Establish reasonable rates which will enable us to take on the business in competition with coal, oil, etc.
2. Adopt a liberal policy toward expenditures for development work.
3. Endeavor to reduce our production cost to a minimum.

Some of the suggestions made may appear as somewhat radical, especially as they pertain to the development of an industry which may fairly be considered as stabilized, an industry which is the second oldest urban public utility and which is now in the second century of its existence. We may at once reject the thought that it has been in existence too long, but may we not, without disloyalty to the industry which we endeavor to promote, ask ourselves the question, has it not possibly been stabilized a little too much?



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## George W. Sheridan

**I**T is with deep regret that we announce the death of George W. Sheridan in New York City, on October 18, following an extended period of failing health, through all of which, to the very last, he attended to the work under his charge with courage and good cheer.

His loyalty to this organization was of the highest quality and his purpose always was to have the matters under his supervision handled on a par with the best. He never spared effort to master thoroughly and exactly the many problems that came to his attention. He displayed rare ability in systematizing his work and the many methods and devices so successfully in use in the treasurer's office are the product of his mind and initiative.

Of a most genial and sunny temperament, he had a fund of anecdotes which helped to smooth out many a hard task and to inject into an ordinary day's work that spirit of enthusiasm and cheer that was so peculiarly his. The many young men, who from time to time came under his influence, never failed to express their appreciation of the valuable training they received under him and of the example he set them of a prudent and frugal mode of life.

Mr. Sheridan entered this organization in 1906. In 1908 he was appointed cashier of the Management Association, and in 1911, there was added to his duties, the position of cashier of the companies under our management. The feeling of personal loss to those closely associated with him is the strongest evidence of the affectionate part that he played in their daily business lives.

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## Conditions In Stone & Webster Territory

*The managers of the companies operated by Stone & Webster, Inc., write to the Management Division of Stone & Webster about the first of each month with reference to conditions in their respective localities during the preceding month. A digest of these letters is published each month in the Stone & Webster Journal.*

### GENERAL NOTES

The Francis J. Hovey Fund is now completed and amounts to \$5,000. Trustees will be appointed to administer this fund which will probably be invested to secure an annuity to be devoted to the foundation of a scholarship in some educational institution.

MR. C. F. W. WETTERER is making a trip to Georgia.

MR. J. H. MANNING, of the Engineering Division, has returned from a trip through Canada.

MR. M. L. SPERRY, MR. A. C. KLEIN and MR. H. VITTINGHOFF attended the convention of the American Gas Association at Atlantic City during October.

MR. J. H. BISSELL, division auditor, is visiting the companies on the Pacific Coast.

Responses from 120 competitors in the advertising contest, submitting approximately 800 advertisements, have been received. This welcome, but unexpected, volume, may somewhat delay the judges in making their awards.

MR. A. A. NORTROP has recently presented the moving picture of and lectured on the Caribou Development before the following organizations: September 18, Western Society of Engineers, Chicago; September 19, Buffalo Men's Club; September 26, Albany (N. Y.) Society of Engineers; October 4, Washington (D. C.) Society of Engineers, and October 5, Consulting Engineers' Club of Plainfield, N. J. MR. NORTROP has personally given this lecture before 16,000 people and the International Y. M. C. A. has presented it to 34,000. This film and paper, translated into Portuguese, has been recently presented to the International Engineers Congress at Rio Janeiro. It has been given before the Imperial University at Tokyo, Japan, and the interest in it has brought inquiries from as far away as Southern India.

MR. H. A. HAGEMAN, of the Engineering Division, has been in Milwaukee, Wis., in connection with the water wheels for the Flat Rock and Green Island developments under construction for Mr. Henry Ford.

We regret to announce the death of Mr. Timothy Daly of Brighton, Mass., in October. He was the father of MR. DAVID DALY, district manager of the Middle West District.

MR. T. L. SMALL, manager of the Baton Rouge Electric Company, has suffered bereavement by the death of a daughter.

MR. CARL ANDREN, formerly purchasing agent for Stone & Webster, died on October 15.

MR. AUBREY E. BEATTIE has been transferred from the Statistics Department to the Cape Breton Electric Company.

MR. EDGAR L. GRANAU has been transferred to the Woonsocket Division and MR. WILLIAM V. HOLICK to the Pawtucket Division of the Blackstone Valley Gas and Electric Company. Both from the Statistics Department.

MR. W. B. MCGORUM has been transferred from the Statistics Department to the Key West Electric Company.

MESSRS. PHILIP L. ALDEN, Massachusetts Institute of Technology, 1922; DAVID D. JACOBUS, Stevens Institute of Technology, 1921, and PAUL D. STUART, Massachusetts Institute of Technology, 1922, have entered the Statistics Department.

MR. DAVID J. FINN, of the Statistics Department, who has been on leave of absence since June 1, 1922, has returned to the office.

MR. J. E. SJOSTROM has joined the forces of the Treasurer's office.

All the arrangements for the annual dinner of the BULLKONEY CLUB, held at the Exchange Club, Boston, Mass., October 9, 1922, were in charge of the following committees, made up of members of the club and of the Boston office force:

*General Committee*—Walter H. Burke, Chairman; John H. Bissell, Nathan H. Daniels, Henry A. Lemmon, Carl E. Weber, Jr., Ralph H. Williams, Edward F. Flynn.

*Stunts Committee*—Ralph H. Williams, Chairman; Fred J. Babcock, Leonard B. Buchanan, Walter H. Burke, Nathan H. Daniels, Fred H. Farnham, Henry A. Lemmon, Warren W. Loomis, John L. Ober, Hans Vittinghoff, Philip L. Warren.

*Music Committee*—John H. Bissell, Chairman; John J. Cronan.

*Souvenir Menu Booklet Committee*—Carl E. Weber, Jr., Chairman; Donald C. Jewett, Mayland H. Morse.

The annual meeting of the BULLKONEY CLUB was held in Boston, Mass., October 12, 1922, and the following officers were elected for the ensuing year:

President, Edward F. Flynn, Boston, Mass.; Secretary, Captain James Francis McLaughlin, El Paso, Tex.

The following members of the BULLKONEY CLUB were unavoidably prevented from being of the group in the photograph taken on the roof of 147 Milk Street, Boston, Mass., October 14, 1922:

Jack G. Holtzclaw, Captain James Francis McLaughlin, Secretary; Edward T. Steel, Philip L. Warren, William E. Wood.

#### BATON ROUGE, LA., OCTOBER 25

The Standard Oil Company is running at its capacity, and construction work is still under way to increase the facilities of the plant and to increase the capacity of the pipe lines to the plant. Other industries appear to be operating at a normal rate.

Wholesalers and retailers in all lines report excellent business for this time of year, and are looking forward to a normal winter business.

Railway earnings for the month of October to date are running about even with the estimate. The power station output and the gas send-out are both running about even with the estimate.

The real estate market continues to be very quiet and there is no new building of importance going on at the present time.

Labor continues plentiful and reasonable in price, and there is no great amount of unemployment.

MR. T. L. SMALL, manager, was elected president of the Chamber of Commerce, at a meeting held on Monday, October 16.

MR. J. N. LOPEZ has been transferred from the accounting department to salesman in the commercial department.

MR. H. R. SHARPLESS, chief engineer of the Pensacola Electric Company, is spending his vacation in Baton Rouge.

MR. R. H. LAWTON, student engineer of the Pensacola Electric Company, is spending his vacation with his parents on Florida Street.

MR. S. H. BREED of the managers' office is enjoying a vacation.

MR. B. L. CALVERT, of the line department, was married on Saturday, October 14, to Miss Geraldine Clayton in Natchez, Mississippi.

MISS EDWINA RATELLE of the gas department, MR. RALPH LOVELAND of the commercial department, MR. A. G. DELARODERIE of the electric trouble department and MR. O. B. STEELE, storekeeper, attended the national meeting of the American Legion, which was held in New Orleans, the latter part of October.

MR. and MRS. V. K. FITCH announce the birth of a son, Thomas Small, on Monday, October 16.

#### BEAUMONT, TEX. OCTOBER 25

Local manufacturing industries have been reporting favorable conditions during September, and for the most part are booked ahead on a fair amount of work. The refineries have been operating on practically a capacity basis. Shipping has also held up excellently.

General wholesale and retail merchants report a slight improvement in business, but not the active improvement which they had anticipated. Conditions may be said to be quietly active.

The company's business has been showing a steady growth and particularly in the light and power division. Railway earnings have, for the most part, paralleled those of the retail trades, but light and power has shown an excellent growth, largely the consumption of current by small light and power customers on a high revenue basis, which more than offsets any decrease in power sales. For the last several months, however, power sales have exceeded last year.

During September, real estate and building activities maintained their wonted high mark.

Labor has been well taken care of in Jefferson County for practically all of this year, and whenever there has been a surplus it has been absorbed without any serious effort.

MR. A. F. TOWNSEND, manager, accompanied by his wife and daughter, returned on the nineteenth, from a vacation spent in Maine. While away, MR. TOWNSEND attended the annual Stone & Webster managers' convention held in Boston from October 9 to 12, inclusive.

MR. R. G. TABOR, of the engineering division, arrived in Beaumont on October 24 in connection with preliminary plans for the extension of the Beaumont office building.

During September and October the company has been building a street railway extension from the end of Magnolia car line to the new site of the South Texas State Fair Association, a distance of about 1,800 feet. The city has co-operated with the Fair Association this year in the erection of permanent buildings for this annual fair for Southeast Texas.

MR. E. L. ROBINSON, of the railway department, went to Houston on October 21 to take the Shrine.

MR. F. ROHWEDDER, who has been with the company in the capacity of trainman since 1913, resigned his position to go in the dairy business.

MR. A. F. TOWNSEND, MR. P. M. MILLER and MR. R. G. TABOR, went to Galveston on October 25, and expect to return in MR. TOWNSEND's car. They will stop over in Houston to see MR. BRADLEY, district manager.

#### BELLINGHAM, WASH., OCTOBER 22

Lumber prices are still firm and all of the cargo mills are running at full capacity, while some of the smaller that depend on rail shipments are closed. The Morrison

Mill has taken off their night crew in the box factory and will start night shifts in their saw mill.

The cement mills are operating at capacity, although handicapped for lack of cars. The fish season is now over and all of the canneries report a much better pack than last year. The Bellingham Coal Mine is running a night shift and with their increased production is trying to build up the retail trade in this city by advertising. A new jig washer has been installed and it is claimed the ash content is materially cut down. The oat crop in Skagit County was very good considering that the weather at the beginning of the season was unfavorable. The crop averaged close to 100 bushels an acre. The pea crop in the Sumas Valley was very good and is bringing \$60 per ton.

With the beginning of the school year and the opening of the Normal School the retail merchants are doing a very good business. Employment is very easy to get and the clothing merchants are willing to give credit to almost anyone. Wholesale groceries and staples sold very well during the harvest period.

Bank deposits in Bellingham for the last three months show an increase of approximately \$300,000 over the previous three months. Clearings are also increasing.

Interurban passenger earnings are slightly better than last month. The number of through tickets to Seattle and Everett were the same, but local business and the sale of school tickets show an increase.

The sale of weekly passes on the city lines is practically the same. The average number of rides per week is still the same and the transfers have not shown the expected decrease. Weather conditions have been favorable to automobile owners so far this fall and no increase in passes from this source can be expected until the rains start.

Freight earnings on the interurban are smaller due to the lack of cars. The Edison Shingle Company is closed while the Clear Lake Lumber Company is getting most of its cars from the Canadian Pacific in care of the Northern Pacific. The Clear Lake Lumber Company is now shipping via their own line to North Mt. Vernon and from there to Anacortes over the Great Northern, where they ship by water. Most of the oat crop was moved by truck to Mt. Vernon and shipped by water, instead of by rail over our line.

It is still too early to see the effects of the reduction in lighting rates. However for September the residential lighting showed an increase of approximately 15 per cent, but commercial power decreased the same amount. Reductions in the suburban lighting rates have been authorized for November 1. This was made necessary by the reduction in Bellingham.

Gas earnings are practically the same as last month.

Building permits are still much higher than last year due to the increased demand for residence and modern business buildings. Several old buildings on North Elk Street near the new Interurban-Stage Union Depot are being torn down and new structures will replace them. The reconstruction of Holly Street viaduct is well under way as well as several extensive paving jobs.

Work is very plentiful in Bellingham and the surrounding towns, although the harvest season is over. The union plumbers have asked for an increase of \$1 per day in order to bring the local scale up to that of other cities of the Northwest.

MANAGER H. B. SEWALL left Bellingham on October 1, to attend the convention of the American Electrical Railway Association at Chicago and the managers' meeting at Boston. JOHN HICKOX, railway superintendent, has been in charge during Mr. Sewall's absence.

R. W. LINDLEY, assistant sales manager, spent October 3, 14 and 20, in Seattle at the division offices determining the new suburban lighting rates.

MR. F. W. BROWNELL, comptroller of the Puget Sound district, was in Bellingham, October 4 and 17.

JOHN HICKOK, railway superintendent, and C. C. COATES, assistant, accompanied by some of the car men, went to Tacoma on October 5, to inspect the interurban car that will be used by this division. They returned the following day.

C. E. STROOP, assistant treasurer, spent the week-end of October 7, in Seattle.

MR. E. H. THOMAS, publicity agent of the Puget Sound District, was in Bellingham, October 9, superintending the announcement of the reductions in suburban lighting rates.

MR. JACK RUPPE, chief storekeeper of the district, came to Bellingham and disposed of the obsolete stock in the storeroom.

ED. L. NOYES, purchasing agent, attended the standardization meeting at Everett, on October 18. All purchasing agents and storekeepers of the district were there with the exception of our storekeeper, J. H. HEYSER.

MR. D. N. KING, insurance agent from the Seattle office, spent October 18 to 20 in Bellingham checking the insurance of this office.

#### BROCKTON, MASS., OCTOBER 23

Continued improvement is shown in the shoe business, the manufacturers reporting steady business, although not yet up to capacity. Other industries are apparently active, especially the rubber trade, and favorable reports are received from wholesale and retail trade.

The company's business is in good condition. Daily loads and output show a healthy increase, and new business is coming in at a very satisfactory rate, 254 additional customers having been taken on in the last thirty days.

Business in the building trades continues active. There were 121 permits issued during the month of September, with a total valuation of \$87,091. The local men interested in real estate who have organized a housing corporation have purchased land in various parts of the city, and intend to build well constructed, moderate priced houses to sell for cash or on easy terms.

The 1922 tax warrant has been issued and calls for approximately \$2,400,000 in taxes.

Work on the Centre Street and City Hall Avenue extensions is progressing rapidly. Permanent paving is now being laid in City Hall Avenue; it is quite probable, however, that the work of permanent paving on Centre Street extension will be delayed until spring.

Labor is fairly well occupied, and the wage situation remains quiet, although in some of the shoe crafts the question of wages is being discussed between the manufacturers and the unions.

The annual Brockton Fair was held early in the month, and final figures show a total attendance of 245,200 for the five days, with total gate receipts of \$193,000.

MR. HOWARD RANDALL has resumed his duties as head meter reader after an illness which confined him to his home for several weeks.

MR. WILLIAM W. BRENNAN has been transferred from the engineering department to the Whitman office, where he will act as general agent of the company in the towns of Whitman, Hanson and Pembroke.

MISS MINNIE PEARSON resigned her duties as cashier on the first of the month, to prepare for her marriage which will take place on October 27. Her position is

being filled by Miss DORIS BEALE, who was transferred from the accounting department.

Miss HAZEL COPELAND has returned from a vacation, part of which was spent in the White Mountains and part at Brant Rock.

Miss MARY KENDRIGAN is spending a vacation at North Conway, N. H., and Miss IRENE WHITE is at Atlantic City for a week.

Miss MARIE MACDONALD has taken a position as stenographer in the accounting department; Miss LILLIAN JOHNSON as clerk in the distribution department, and Miss MARY CREHAN as clerk in the commercial department.

#### COLUMBUS, GA., OCTOBER 24

All the textile mills are now operating on full time schedule. They report a fair number of orders ahead. The outlook in the textile industry here for the next three months is excellent.

The Government's estimate shows that the number of bales of cotton produced in Georgia for 1923 will be close to 910,000.

The past month has not seen any large building projects started, but the number of homes that are being built throughout the city has kept the local planing mills and lumber yards well supplied with business.

The Central of Georgia Railway has discontinued the mixed freight and passenger train which they have been running between Columbus and Americus, and plan to install an additional passenger service between these two places. In addition to this fast freight service will be given between the two towns. The September business showed a 50 per cent increase over the September of a year ago.

All lines of business are showing increased activity. Retail business here has been greatly benefited during the month. Two factors have contributed to this, one being the arrival of officers at Fort Benning and the other the Chattahoochee Valley Fair, which was held for a period of a week.

Smith Clothing Company, which is exclusively a men's furnishing store, opened up in their new location last week. The Georgia Grocery Company, which is a combination retail and wholesale grocery company, recently moved into their new location at Second Avenue and Twelfth Street.

Local cotton warehouses report a lively movement of this year's crop, and the price is high enough to allow the farmers to cancel the greater part of their old debts.

The improved conditions here are well reflected by the increased activity in auto sales. The majority of all industrial plants here are operating on full time. A few continue to operate on part time, but give as a reason for this their inability to obtain materials on account of the recent tie-up in transportation.

With the improved conditions of the textile industry our output of power has naturally increased. The sale of wholesale power within the last two weeks is very noticeable. We believe all danger of a curtailment is over, and the earnings for next month should show a good gain even over our revised estimates. The improved conditions are reflected in our retail light and power department. The gas department receipts are now beginning to show a small increase, and with the increased send-out, due primarily to the cooler weather now prevailing, this department will no doubt begin to improve.

The City Commissioners have notified us of their intention to widen the parking space on First Avenue between Thirteenth and Fifteenth Streets. This will necessitate the resetting of our trolley poles in this section. The estimated expense to do this work will be \$1,000.

A \$40,000 addition is to be constructed to the Wynnton School. Finances for this improvement will be provided by the issue of six per cent bonds.

The Chamber of Commerce is strongly behind a movement to float a \$1,000,000 bond issue which will be used for paving the roads in Muscogee County, and to provide an adequate sewer system and school facilities in Columbus. The idea is to have the bonds voted jointly by the city of Columbus and Muscogee county. A committee has been appointed by the Chamber of Commerce to confer with the City Commissioners to perfect some plan of action.

The local supply of day laborers is fully equal to the demand. The large amount of construction which has been going on here during the summer has required more skilled laborers than could be found locally. Lumber mills have increased their labor forces, and the Chero-Cola and Coca-Cola Bottling Companies have also added to their forces.

While October has been a comparatively dry month, several rains occurred which improved the river flow enough to do away with the danger of curtailment.

MR. B. T. LONGINO, general superintendent, and MR. H. W. PATTERSON, sales manager, have returned from a trip to Savannah where they attended the Kiwanis convention. Columbus is to have the Kiwanis Interstate Convention next year.

MR. R. M. HARDING, manager, reports an enjoyable time at the managers' convention held in Boston during the early part of October.

The employees of this company recently constructed a volley ball court and expect to organize both a volley ball and a basket ball team which will compete with teams from the different textile mills here.

MR. HENRY B. CRAWFORD, city manager, has resigned to accept a more remunerative position with an eastern construction company.

A Hallowe'en party is to be given by the Electric City Benefit Association here on October 31 at Wildwood Park.

MR. M. J. FOX, our purchasing agent, and MR. W. R. CLARKE, superintendent of distribution, were in Florida the early part of October where they purchased 400 white cedar poles for use in the reconstruction of the telephone line between Goat Rock and Columbus.

Mrs. Harding, wife of our manager, was very ill for nearly ten days this month but she is now much better.

MR. A. M. SPENCER, foreman of the gas plant, has practically recovered from injuries which he received by the explosion at the plant, and expects to be back on the job regularly within the next few days.

MR. HANS VITTINGHOFF paid us a visit during the month. He was here in connection with the repairs which will be undertaken at the gas plant as a result of the recent explosion.

#### EL PASO, TEX. OCTOBER 24

There has been no change in business conditions as compared with last month, all local industries operating below normal.

Wholesale and retail business is reported to be far from satisfactory, with collections slow.

Business with the company continues quiet with the outlook for the future somewhat uncertain.

Building as compared with last month has fallen off, permits for August totaling \$250,855 and for September \$226,714, covering in most part bungalows.

Due to the slump in building activities, there is some unemployment among



skilled and common labor although the local railroad shops are reported to be increasing their forces.

Mr. R. O. HIMEL, assistant treasurer, has returned from a business trip to the Boston office.

M. H. FLIEY, day dispatcher, and wife, have returned from their vacations. They visited Cleveland, Chicago and other points east.

Miss N. R. MOSS, bill clerk, has returned from her vacation which was spent at Cloudcroft.

Mr. H. L. RED, chief meter reader, is enjoying a two weeks' vacation.

Mr. and Mrs. H. T. BURNHAM announce the birth of a son, Thomas, Junior, on September 21.

Mr. ALBA H. WARREN, manager, is in Boston attending a meeting of all the managers and district managers of the Stone & Webster Companies.

On September 16 a company picnic was held at Washington Park between 2.00 and 8.00 P.M. There were from 350 to 400 people present which was the largest gathering of company folks in the history of the company. There was plenty to eat, together with amusements of all kinds which made it a big success.

HORACE HART and Miss MARY LOU TUCKER surprised their many friends by being quietly married Friday night, October 6, at Las Cruces, New Mexico. Mr. HART has been on the operating force at the power plant two and one half years.

A big game hunting party left El Paso on September 22 for the mountains in Southwestern Chihuahua and returned on Saturday, October 7. The party included J. E. LAWLESS, master mechanic, F. B. SCURLOCK, superintendent transportation, C. T. WOODS, clerk, J. E. BEAVINS, trainman, J. C. PORTER, trainman, W. E. CROW, bridge toll collector, and TOBE H. WALTERS, line foreman. The party traveled by rail from El Paso to Colonia Dublan, Mexico, and then by horseback to the mountains. They spent four days in the saddle before they reached the big game country where deer, turkey, bear and lion were plentiful as well as mountain trout, weighing around a pound and a half.

Miss ALTA SKIDMORE, stenographer in the engineering division, was married on October 7 to Mr. A. B. Coates of the Buick Motor Company.

Mrs. NORA POGUE, of the lighting superintendent's office, has been the recipient of a number of entertainments since the announcement of her engagement to Mr. WALTER BANNER of the accounting department. The wedding is to take place on Tuesday, October 24. Two delightful showers were given in her honor on Saturday, October 14; one in the afternoon by Mrs. E. M. HUNTER and Mrs. F. H. PATTERSON at the latter's home on Mountain Avenue, and the other in the evening by Miss KATHRYN RACHAL and Mrs. REBA MURRAY at their home on Oxford Street. Another very pretty party and shower was given on October 21 by Mrs. H. I. WAMBEAM and Miss ADA GOFF at the home of Mrs. WAMBEAM in the Sterling Apartments.

Miss VERA CAVINESS is taking the place of Miss ADDIE KERR, as stenographer, in the commercial department.

Miss KERR has been transferred to the lighting superintendent's office.

Mr. ALBERT T. KUNZ, editor of "*Cactus Points*" is spending his vacation among friends and relatives in Houston.

#### EVERETT, WASH., OCTOBER 23

The cumulative effect of the car shortage is being felt very severely at the present time and during the last three weeks it is having a decided effect upon

the lumber industry. Although the railroad shops in this section of the country have procured practically all the help necessary, except engine repairmen, the effect of several months of a partial repair force has been to place the bad order cars upon the siding with the hope of making repairs at a later date. They now have accumulated to such an extent that the mills in this district are only receiving approximately 10 per cent of their demand for cars. As a consequence almost every shingle mill in the district has been forced to close and one inland mill, the Rucker Mill at Lake Stevens, manufacturing fir lumber has closed also, the Snoqualmie Falls mill is only operating four days per week. Unless this shortage can be eradicated soon probably most of the mills in Everett will be forced to close. The fir mills, which are still operating, report their production is a small percentage above normal. However, recently the export business has fallen off quite considerably due to the exchange rates, and the export business which has been going to Australia and New Zealand has been transferred to British Columbia, which is making their mills quite prosperous. The demand from Japan has fallen off severely, due to either internal troubles or to heavy buying during the early part of 1922. Smaller shipments are also being made to the west coast of South America. A local lumberman states that probably the export shipments from Everett during the last six months of 1922 will only be one-half of those made during the first six months. The Weyerhaeuser Timber Company continue heavy shipments to its wholesale yard at Baltimore.

Local wholesale hardware merchants report that despite the car shortage the mills and logging industry are buying as heavily as they have during the past eight or nine months, and this particular wholesale business is in a very prosperous condition at the present time and they feel very confident of a continuance of the present prosperous condition at least for six months more.

The wholesale grocers report trade also excellent. The retail merchants report satisfactory trade and a slight improvement in the sale of luxuries.

The interurban traffic continues satisfactory and according to the last daily earnings report the entire line from Bellingham to Seattle shows an increase in gross over the preceding period for last year of 42.1 per cent. City line receipts for the first 17 days of October show a decrease of 1 per cent. When allowance has been made for the loss of Snohomish line earnings, the city lines show an increase of 10 per cent.

Actual connection of customers on the new Lake Stevens, Home Acres and Marysville extension is proceeding in a satisfactory manner. The current was turned on in this extension during the past month and at present 91 cut-ins have been run. The payments necessary by the customers are coming in satisfactorily.

Residence building continues practically the same as during the summer period. Several business buildings are under construction either for repairs or for new construction.

#### FALL RIVER, MASS., OCTOBER 19

Conditions in the local cotton cloth market are improving with rising prices and active demand for goods. General business is fairly good though not as active as the merchants would like.

Sales of gas appliances are greater than ever before at this season of the year. The September sales of gas ranges having been only slightly exceeded in one month previously during the year. It looks as if October sales would be greater than for any month for several years and the largest for October in our history.

There is much building going on though probably not as many new houses being started now as earlier in the season. This is due probably in part to the season of the year and in part to the higher prices of building materials and building labor.

The Moore Container Corporation has just bought the plant of the old Cote Piano Company and is raising \$300,000 of capital in this city to manufacture paper containers of all kinds.

At the present time there seems to be a decided labor shortage in this city, not only of building mechanics but even of common labor. The city has just appropriated another \$50,000 for highway work with the result that their activities will continue until cold weather.

MR. JOSEPH E. NUTE, manager, attended the managers' convention which was held in Boston, October 8 to 13, and was a guest at the annual dinner of the BULLKONEY CLUB which took place on October 9 at the Exchange Club.

MR. F. P. DEXTER, assistant treasurer, attended the annual dinner of the BULLKONEY CLUB held at the Exchange Club, Boston, October 9.

MESSRS. GILBERT, EAVENSON and DEXTER visited the Providence Gas Company, Friday, September 29, relative to employees' educational work and matters pertaining to distribution services.

MISS EVELYN PORTER STOREY, cashier, and MR. ALBERT G. PIERCE, paymaster, were married on October 7 and spent their honeymoon with Mrs. PIERCE's parents in New York City.

MR. JAMES F. DUNN, formerly assistant foreman of the Pawtucket Gas Company's meter repair shop, has recently been promoted to the position of foreman of the meter repair shop at Fall River.

MR. JAMES F. CRAY of Greenfield, Mass., has been engaged by this company as foreman of the fitting shop at our Fifth Street plant. MR. CRAY has been for eleven years employed by the Greenfield Gas Light Company as fitter, foreman fitter and salesman.

A meeting of the Gas Appliance Testing Committee, consisting of W. K. EAVENSON of Fall River as chairman, W. R. BELL of Haverhill, C. L. KEBBE of New London, E. S. ROBERTS of Pawtucket and R. BUCKMINSTER of Pawtucket, held at Fall River was attended by MR. VITTINGHOFF who is kindly acting in the capacity of consulting engineer. There were also present, MR. NUTE of Fall River, MR. BAKER of New London and MR. W. D. STEWART of Fall River who has consented to serve as advisory engineer with MR. J. W. HOWARD who does the actual testing for the committee. After some discussion and criticism of the work already done, the outline for future work was carefully gone over and a program of work for immediate consideration was drawn up. The meeting lasted in all about five hours, with an intermission during which the committee was taken to the Quequechan Club for lunch through the courtesy of MR. DEXTER, assistant treasurer at Fall River.

Two ball games were played between the Blackstone Valley Gas & Electric Co., and the Fall River Gas Works Company, the first one on October 7, score 4 to 0, and the second one on October 14 at Pawtucket, score 8 to 1, both in favor of the Blackstone Valley Gas & Electric Company.

#### FORT MADISON, IA., OCTOBER 20

The Junkin Paper Mills are making plans to carry on more extensive sales of their kraft paper, which should materially increase their output.

All other industries are operating at about their normal capacity.

Our residence lighting is showing a very nice increase over last year, due largely

to the number of new houses that have been built, and the old houses that have been wired.

On October 5, 6 and 7, the electrical contractors of this city, together with our company, held a very successful electric show. This was the first show of its kind ever held in this city, and met with success in every way.

Mr. Gilbert E. Lee has purchased the Florence Hotel and will operate it commencing November 1. This is one of the best hotels in the city and, with Mr. Lee managing, it should prove very popular.

The building located at 714 Second Street has been purchased by Mr. John Larson, who is manager of Larson's Bakery. In the Sunnyside addition there has been one house completed and three new houses started during the past month.

The city has made arrangements to widen Santa Fe Avenue in order to take care of the increased traffic which this street has.

The cornerstone for the new high school was laid on October 19, with appropriate exercises.

A heavy frost occurred on October 17 and 18.

Mr. P. I. ROBINSON left for Chicago on September 30, where he attended a hearing on rural service before the Illinois Commerce Commission. From Chicago Mr. Robinson went to Boston for the annual managers' convention.

Mr. CLYDE C. BUFFUM, electric superintendent, was married on October 18, to Miss Inez Leona Seifert, of Keokuk, Ia. We are all waiting their return from Chicago to give them our best wishes and a royal reception.

Miss THEOPHILIA E. SCHMIDT is spending two weeks at home.

Mr. LESTER KNAPP, of Keokuk, Ia., is in temporary charge of the lighting department during Mr. ROBINSON's and Mr. BUFFUM's absence.

Mr. HARRY PARKS attended the Hampshire Pig Club picnic at Donnellson, Ia., on October 19. He reports having a fine chicken dinner.

#### FORT WORTH, TEX. OCTOBER 24

There has been no material change in the condition of local industries in Fort Worth and vicinity since our last letter. They continue to show a fair increase in activities over last year, and, while they are not doing an unusual business, the majority of them report that they are very well satisfied with business in general.

The cattle industry is gradually working itself into a more satisfactory condition; the market for the past month has shown signs of strength, and cattle shipments continue to show an increase over last year.

A recent bulletin issued by the Census Bureau of the United States officially rated Fort Worth as the most important manufacturing center of the state. According to the figures of this report Fort Worth leads the Southwest in the total value of manufacturing products by a margin of \$39,139,000. It also indicated the advantageous location of Fort Worth for manufacturing industries, in that for every \$15.00 spent in manufacturing articles only \$1.00 was spent for labor.

The retail merchants report that their business is not unusual, but at the same time they are doing a fairly good business, and are satisfied with the outlook. Their gross business is showing some increase over last year, and collections are holding up very well, with about the same increase over last year as reported last month; that is, approximately five per cent.

The W. T. Grant Company opened a store in Fort Worth during the month. They operate on a chain store system, and have a great many locations over the country. They specialize on 25c, 50c and \$1.00 articles, and operate practically on

the same basis as Kresge & Company, and other 5c and 10c stores. They attracted unusually large crowds during the first few days they were opened, and indications are that their store will be very attractive to certain classes of patronage.

The wholesale business is in very good condition as a whole, and collections are fairly satisfactory. From what we can learn, the wholesale houses are all in good financial condition, and are optimistic as to the future outlook.

Earnings on the city division for the first 20 days of October were practically the same as the first 20 days of the previous month, and approximately 5.5 per cent less than for the same period last year. The interurban showed considerable increase over the same period last month, which, of course, was due to the Dallas Fair traffic. This division is showing a large decrease from last year on account of the Dallas Fair running for a period of sixteen days last year, while this year it only ran nine days. About the same amount of traffic was attracted by the Fair this year as was for the first nine days of the Fair period last year.

The Tarrant County Traction Company is showing an increase over last year of 4.5 per cent, and the first 20 days of this month is approximately the same as for the same period last month. This is due, we believe, to improved crops over last year, and also the financial condition of this territory is in better shape this year.

With the marketing of the cotton crop and some improvement in the cattle industry, money is somewhat more plentiful than it has been, however, it is the opinion in some circles that this condition will not last for long, due to crop failures, and the chaotic condition of the cattle industry for the past year or two, causing an accumulation of debts, which will have to be liquidated. This will, of course, cause a great many farmers and cattlemen to operate on a credit basis for another year.

Bank saving deposits in Fort Worth increased eight per cent in the last year; the total amount of these deposits being \$5,822,000.

The real estate and building activities continue on about the same basis as reported last month. There have been no large real estate deals or building activities during the month, with the possible exception of the beginning of construction work on the city sewage disposal plant.

There have been no unusual events in labor circles during the last month. There has been quite an improvement the last few weeks over the conditions existing a month or so ago. The railroads are gradually improving their shop forces, and seem to be operating their trains in fairly good shape.

A "Home Labor" clause was inserted in the construction contract between the city and the construction company on the sewage disposal plant. This clause stipulates that Fort Worth people will be given preference of employment on this job.

Weather conditions for the month have been very satisfactory as a whole. Much needed rains fell over practically the entire state during the month, and relieved drought conditions in several sections. Due to the very favorable weather during the fall, the cotton crop in this section is practically gathered, and the recent rains will now enable farmers to begin with their wheat planting.

MR. LUKE C. BRADLEY, district manager, and MR. W. E. WOOD, manager of the Houston Electric Company, spent October 18 in Fort Worth.

MESSRS. G. H. CLIFFORD, manager, V. W. BERRY, general superintendent, L. E. DELF, electrical engineer, J. T. PORTER, master mechanic, T. W. WREN, claim agent, R. C. TABOR, construction superintendent, and DR. ALDEN COFFEY, physician for the Mutual Aid Society, attended the Electric Railway Association in Chicago.

MR. H. C. PRESSLER, master mechanic for the Eastern Texas Electric Company, was a visitor in Fort Worth during the month.

The Dallas Fair opened on October 6, and closed on the 15th. The fair attracted very good crowds, and had an unusual number of very attractive exhibits on display. The fair period was unusually short this year, it being customary for it to last at least two weeks.

MESSRS. R. C. TABOR, H. M. ROBINSON, R. V. THOMAS and J. H. BOWEN, spent part of the month in Houston, assisting the Houston Electric Company on some appraisal work.

MR. R. C. ALLEN, chief inspector for the Houston Electric Company, spent a few days in Fort Worth during the month.

#### **GALVESTON, TEX. OCTOBER 24**

All major exports, except wheat and flour, show heavy gains in September over August. Cotton reflects the greatest increase with 207,205 bales exported in September against 84,004 bales the previous month.

Much cotton is being concentrated in Galveston this year and the new concentration warehouses are important factors in taking care of the large volume of this staple that is moving to this city for export.

Wheat exports for the month of September show a decrease of 2,230,971 bushels under August. However, it is predicted that within a short time, when shipping on the Great Lakes is stopped by reason of the lakes being frozen, grain will begin to move through Galveston again in large quantities.

Coffee imports through this port are growing rapidly and it is believed that great strides will be made this year in importations of this commodity. A Japanese ship is en route from South America with a cargo of 11,300 bags for this port, and an American ship is now loading between 25,000 and 30,000 bags at South American ports to reach here early in November.

Export and coastwise shipments of oil show a gain during September, which served to offset the decline in crude oil imports for the month.

The volume of coastwise traffic has shown a marked improvement within the past two months. Both the Morgan and Mallory lines have added more tonnage by additional or larger ships during this period, and indications are that this business, during the next twelve months, will be greatly increased.

Merchants are looking for a general improvement in all lines of business with the volume of cotton beginning to move through here. Improved conditions were noted during the past month.

More than six hundred members of the Laundry Owners' National Association visited Galveston on October 6. This visit was part of the program of the convention of this organization held at Houston.

Approximately six hundred Masons from all parts of the United States were in Galveston, October 16 to 20 for the semi-annual reunion.

Winter tourists' rates were put into effect by railroads here on October 1, and will continue until April 30. An effort is being made to have Galveston recognized as a winter resort and pamphlets and other literature, describing the city's winter attractions, are being distributed as a means of building up this feature.

Building permits for the month of September totaled 331, with a valuation of \$138,594. The building of homes continues good.

The new concrete storage bins at the Galveston Wharf Company elevator B are now completed. This addition will make the combined capacity of this elevator 2,060,000 bushels, an increase of 1,460,000 bushels.

The Engineering Department of the United States government has announced

that \$25,000 will be expended here for the construction of machine shops at Fort Point.

The Gulf, Colorado & Santa Fe Railway will, within the next ten days, begin the erection of new train sheds which will involve an expenditure of approximately \$25,000.

Two hundred thousand dollars is available for the purchase of additional ground for playgrounds for the public school children of Galveston by the terms of the will of a late Galveston benefactor.

Employment in Galveston is fairly well balanced with the exception of railroad shops and a small surplus of clerical help.

MR. R. G. CARROLL, manager, attended the managers' convention in Boston, October 9 to 14. Before returning, Mr. CARROLL visited his home in Virginia.

MESSRS. P. L. WHITAKER and W. E. TUCKER visited this office during the month.

MESSRS. S. P. MACFADDEN of the district office and D. S. McMANUS of the Houston Electric Company were visitors during October.

MR. J. E. MURRAY, formerly general clerk of this company, paid us a visit while en route from Reno, Nevada, in which company he was chief clerk, to Pensacola, Florida, where he will assume the duties of assistant treasurer of the Pensacola Electric Company.

MESSRS. A. E. HATLEY, and L. G. EUGLEY, of the Eastern Texas Electric Company, Beaumont, visited this office during the month.

MESSRS. D. V. THOMAS, J. B. BOWEN and H. M. ROBINSON of the Northern Texas Traction Company, Fort Worth, were recent visitors here.

MISS JOSEPHINE KAMPE, stenographer, spent her vacation in Dallas, Texas, during the State Fair.

MISS JULIA THEOBALD, stenographer, is attending a convention of the Eastern Star at Dallas.

MR. GEORGE F. PIERCE, claim agent, is spending several weeks in Mineral Wells on account of impaired health.

#### HALIFAX, N. S., OCTOBER 24

The shipping and port business of Halifax increased slightly during the month and shows a fair gain over the same period last year.

The wholesale and retail trade reports business somewhat dull, acknowledging however that this is the off season.

The company's business remains firm and shows an increase of about eight per cent in the light and power output over the same period last year. In the gas department the send-out is about the same as in 1921 with prospects bright for new business. In the tramway department the receipts are not as high as last year but there has been some improvement as compared with the September figures.

Real estate remains inactive with only a small number of transfers reported.

There has been practically no change in the labor situation since September.

MR. A. STUART PRATT, president of the company, visited the city for a few days about the last of September.

MR. W. L. WESTON, manager of the company, attended the Stone & Webster managers' convention at Boston during the month and states that it was a most successful gathering.

MR. C. F. STEGER, assistant treasurer, accompanied by MR. A. W. WENTZELL, chief clerk, spent a few days in the woods and was successful in bagging a moose.

**HAVERHILL, MASS., OCTOBER 19**

The business of our shoe factories has been slightly above normal during this past month, although at the present time, due to the controversy between the two unions there is a general feeling that business which ordinarily comes to Haverhill is being diverted to other shoe centers. This tendency has not yet been felt in a general way.

Wholesale and retail business seems to have responded as usual to the fall activities and the general opinion is that it is normal.

Our gas send-out seems to fluctuate considerably with the weather and it seems very reasonable to expect that as soon as the cold snaps are more persistent we will enjoy a much larger business. Our send-out for the month to date is 2.3 per cent greater than for the corresponding period last year. This amount is slightly less than our estimates anticipated. During September we sold more room heaters than were sold during the entire year of 1921; none were sold during September, 1921.

September building permits are now available and we find that 65 permits were granted this year as against 43 during September last year, the increase in amount being about 200 per cent. Among the permits granted was one for some stores and a club room on Main Street to the amount of \$75,000.

The labor situation is still in a turmoil, due to the controversy between the Boot and Shoe Workers' Union and Shoe Workers' Protective Union. One of the factories involved has determined to leave Haverhill and is opening a factory in Stoneham. Two others have not been seriously affected and the J. H. Winchell Company is operating, although not under very satisfactory conditions.

The demand for gas seems to vary more than usual during the cold snaps which have visited us, a condition which undoubtedly indicates the conservation of coal.

MR. VITTINGHOFF and MR. JEWETT from the Boston office spent a day in Haverhill during the month.

MR. J. T. SULLIVAN, chief chemist, with Mrs. Sullivan spent a week's vacation in Fall River visiting relatives.

MR. T. P. WALKER attended the managers' convention held in Boston during the week of October 9.

MR. J. P. INGLE, manager of the Jacksonville Traction Company, called at this office on October 13 and his many friends in Haverhill were glad to see him.

MR. W. R. BELL, sales manager, attended the meeting in Fall River on October 19, of the Appliance Testing Committee.

MR. H. P. DAYTON and MR. W. R. BELL attended the convention of the American Gas Association held in Atlantic City during the week of October 23.

MR. and MRS. GEORGE A. CAMPBELL of Reno, Nevada, visited Haverhill during the managers' convention.

MR. GEORGE McCAFFREY, chemist and MR. GEORGE JONES, meter repair foreman, spent a portion of their vacation touring Canada by automobile.

**HOUGHTON, MICH., OCTOBER 20**

The local mining companies, including the Copper Range Company, the Quincy Mining Company, the Mohawk Mining Company and the Calumet & Hecla Mining Company, have recently made increases in their wages. This places all of the mines in this district on practically the same wage scale. Men continue to leave the district, however, particularly in the Calumet district.

There has been little change in the condition of local wholesale and retail business during the past month, but the increase in wages just announced should be reflected in local business in due course.



Business of the lighting company has dropped off somewhat due mainly to a decrease in power earnings and commercial lighting. Residential lighting holds very steady. Business of the traction company continues about the same, although there is a slight increase in business due to poor weather conditions making for a smaller use of automobiles.

At Tamarack City, a reclamation plant is under construction by the Calumet & Hecla Mining Company. This plant will recover copper from the stamp sands of Torch Lake, these being the waste from former milling operations.

There is still a shortage of labor in the copper mines, this being largely responsible for our low power sales to the Quincy Mining Company.

MR. W. B. LATIMER, chief engineer, returned during the latter part of September from a vacation spent at Savannah, Georgia. Before returning to Houghton, Mr. LATIMER visited the Keokuk properties.

The twentieth annual Copper Country Fair was held during the week of September 26 to 30 in the Amphidrome building, Houghton. Our company took part in erecting a booth, which created considerable interest and attracted thousands of people who visited the fair. The outside decorations of the booth were made of artificial sprigs with apple blossoms, and the entire booth was illuminated with a large number of mazda lamps.

Four girls of the office, with Miss MARGUERITE ROHLMAN, sales lady in the Houghton office, in charge, served electrically made waffles and percolated coffee. Demonstrations were made of various appliances, and a radio telephone, operated by Mr. JOHN KNAPP of the engineering department, gave several concerts received from St. Louis, Kansas City and other broadcasting stations. The electric meter serving the booth was equipped with a modern safety entrance switch, and during the various appliance demonstrations the operation of the meter was explained and this switch demonstrated.

In the background was a miniature of our electric light plant, and lines running up a hill illuminated a modern electric home. A miniature lake, seagulls and diving board was the center of attraction for the children.

Over five thousand youngsters attended the fair on children's day and special arrangements were made to entertain the children at our booth. This was provided by connecting a Eureka vacuum cleaner attachment to the blower side and suspending a celluloid ball in the air above it.

Comfortable chairs and a telephone were provided for visitors at our booth, and each was given an invitation to visit our power station and other properties, information on appliances being printed on the inside of this invitation. Over ten thousand pieces of literature was distributed from our booth and over 24,150 people attended the fair.

On September 29, the temperature reached 87 degrees. Only once during the past 22 years has a higher temperature been recorded. The first snow of the season fell on October 11.

Copper shipments during September, through the Keweenaw waterway, amounted to 5,969 tons compared with 5,364 tons in August and 3,514 tons in September, 1921.

MR. S. B. TUELL, receiver; MR. JOHN RALPH, JR., general superintendent; MR. H. E. MATTHEWS, assistant superintendent; and MR. WALTER WUEBBEN, master mechanic, attended the American Electric Railway Association's convention at Chicago during the week of October 2 to 6.

MR. S. B. TUELL, receiver, and MR. A. F. REES, attorney, made a brief business trip to Marquette, Michigan, early in October.

MR. S. B. TUELL, receiver, attended the managers' meeting in Boston during October.

MR. JOSEPH POPE, of the Betterment Division, arrived in Houghton on October 9 and spent a few days in the district in connection with work for the Calumet & Hecla Mining Company.

MR. B. E. VAN VLIET and MR. W. W. WALTER, auditors, completed the audit of the books and records of the Houghton companies and left here on October 10.

MR. EARL TROWBRIDGE, assistant chief clerk, took charge of reservations for the local Legion members who are attending the national convention at New Orleans.

MISS ENID POLKINGHORNE, of the Calumet office, took part in the play "Kathleen," given by the B. P. O. E. at Calumet on October 17 and 18.

MR. JOHN KLASNER, who has been assisting the auditors during the past month has joined the staff of the lighting company in the capacity of collector.

The Mohawk Mining Company has recently declared a dividend of \$1.00, payable November 15.

MR. BERT BONENFANT, meter foreman at Calumet, while hunting in the vicinity of the hunting lodge at Copper Harbor on October 15, found a pair of deer antlers. Many reindeer have been seen by parties on their trips this season.

#### HOUSTON, TEX. OCTOBER 23

Statistics compiled by the port director showed that September marked a turning point in the business of the port of Houston. The salient points in the report are: Inbound coastwise business showed a 150 per cent increase over September last year. Imports and exports doubled. The number of vessels using the port showed a 60 per cent increase over the same month of 1921.

Since our last letter the Houston Electric Company filed application with the city asking for an increase in fares, from 7c to 9c and from 3½c to 4½c for half-fare, together with the abolition of tokens. This was made necessary by decreased earnings which we attribute largely to jitney competition. As the city failed to act on this application, construction work was stopped until some settlement could be reached. Within the past week the city council has agreed to reduce the number of jitneys operating to 150 by January 1st, provided the Houston Electric Company immediately resumed its construction program. Accordingly construction work has been resumed and we are waiting for the city council to carry out its part of the agreement.

The Houston Terminal and Refining Company, a Houston corporation, capitalized for \$500,000 has purchased the Turnbow Oil Refinery and will operate this property.

The American Brake Shoe and Foundry Company of New York is contemplating opening a \$500,000 brake shoe and foundry plant in Houston within a short time. Application has been filed with the city, asking that Maffitt Street be closed in order that the foundry may be located on property nearby.

The organization of two new financial institutions, The Interstate Trust Company and the Southern Trust Company has been announced. The Interstate Trust Company is capitalized at \$250,000 and will be the holding company for a number of trust companies and savings banks to be organized later. The Southern Trust

Company is capitalized at \$200,000 of which \$175,000 is held by the holding company.

All differences have been adjusted in the railroad strike in Houston and all roads effected are taking back their old employees.

MR. F. J. BENNETT, master mechanic, and MR. G. S. BRUSH, superintendent of transportation, attended the American Electric Railway Association convention at Chicago.

MR. W. E. TUCKER has returned to Boston after spending several weeks in our city.

MR. R. G. CARROLL visited our office on his way to the managers' convention in Boston.

MR. A. T. KUNZ, formerly purchasing agent and now with the El Paso Electric Railway Company, is spending his vacation in Houston.

MESSRS. D. V. THOMAS and J. H. BOWEN have returned to Fort Worth.

MR. G. S. BRUSH has returned from a vacation spent in New York and other eastern points.

MR. R. G. TABER passed through Houston on his way to Beaumont.

#### JACKSONVILLE, FLA., OCTOBER 23

There are many indications that general business conditions are improving, and may soon be expected to return to normal. Increasing activity is shown in the movement of import and export business through Jacksonville and other South Atlantic and Gulf ports, due to the restoration of normal transportation conditions on Southern railroads, and the establishment of adequate steamship service through these ports to foreign countries.

It is believed that the coming season will prove an exceptionally good one for tourists. Daily arrivals to date show a 20 per cent increase over previous years.

The United States Department of Agriculture's estimate indicates that the 1922-23 crop of citrus fruits in Florida will be 15,000,000 boxes, which exceeds last season's production by nearly 2,000,000 boxes.

There was considerable activity both in real estate and building during the month though for the most part confined to small items. There were 257 permits issued, involving a total expenditure of \$535,096, including one permit for the erection of a \$150,000 factory building. Contract has been let for the construction of the Sunday School building of the First Presbyterian Church, at an estimated cost of \$65,000.

One hundred and twenty six ships arrived and cleared from Jacksonville during the month of September. This is an increase of 16 over the same month last year, but falls below the August, 1922, record by 20 ships. Of September's total ships, 109 were "coastwise" of 203,914 tons, and seven were "foreign" of 42,138 tons.

Exports for September were valued at \$607,800, with imports amounting to \$205,000. These figures show an increase over the figures for last year.

The chief development of the month has been the improvement in the labor situation, which is about normal again.

Bank clearings for the four weeks of September amounted to \$38,324,000, a gain of approximately 16 per cent over September, 1921.

Postal receipts for the month fell short of those for the same month last year, the amount for September, 1922, being \$54,240.76 as compared with \$62,351.57 for September, 1921.

MR. E. J. TRIAY, who has been staying in Maine during his vacation, returned on October 18. The *S. S. Lenape*, on which he made the trip from New York, ran on to

a sand bank in the St. Johns River during a heavy fog, and after a delay of some thirty hours the passengers were transferred to another ship and brought to Jacksonville.

MR. A. J. MONNEN, of the Savannah Electric Company, came to Jacksonville on September 21 to assist in the installation of the fuel oil burning equipment. Mr. MONNEN rendered us very valuable services.

On September 23 two boilers in the power station were put in operation burning fuel oil, and with one or two interruptions, due to inability to keep a sufficient supply of oil on hand, they have carried practically the entire load of the station since that date. The storage tank has been completed and work is progressing rapidly on converting another boiler to fuel oil burning.

MR. and MRS. L. L. HIRSCH, who were married in Pensacola on September 9, were presented with a beautiful set of knives and forks by the employees of the company.

MRS. M. F. BRAGUNIER has resigned to accept a position with a prominent advertising firm of this city. Her place has been filled by Miss K. T. THOMSON, formerly with the claim department.

MR. D. H. GRAHAM, chief clerk, was away during the month on a vacation trip, during which he visited Boston and New York.

MR. T. J. HANLON, JR., of Tampa, was in Jacksonville during the month.

MR. J. P. INGLE has returned from attending the Managers' Convention in Boston, and reports a most enjoyable, as well as instructive visit.

MR. DOUGLAS NORRIS, of the accounting department, is spending his vacation with his family in Bartow, Florida.

The dengue fever has been very prevalent in Jacksonville during the past month, and many members of the organization have suffered an attack. All have duly recovered and are now back at work.

KEOKUK, IA., OCTOBER 21

*Keokuk Electric Company*

There has been no noticeable change in the operation of local industries during the past month, practically all continuing on a good steady schedule.

The Keokuk Steel Casting Company, having been idle for some time, are now making extensive plans to reopen about the middle of November with a force of 50 men. This company recently secured \$102,000 additional capital, \$45,000 of which is now being put into new equipment and building. Forty per cent of the production of this plant has been contracted for by the Springfield Boiler Company of Springfield, Ill. Electricity is used entirely in their process of manufacture.

The Standard Four Tire Company expect soon to start construction work on a new warehouse 50 by 100 feet, which they find is necessary on account of their increased production. The local freight offices of the C. B. & Q. Ry. Company and the Wabash report their gross business to be very much affected by the present shortage of cars and the embargoes placed on goods consigned to local concerns. Their greatest volume of business during the month has been in coal.

The business situation so far as attached to the trade territory of Keokuk is, in the opinion of local bankers, very much improved. The general feeling of better nature prevails; merchants are buying carefully but in considerably increased amounts.

The annual crop yield in this section is large and while prices of some of the

farm products are relatively low as compared with other prices, yet there is a marked improvement over last year.

Our local wholesale establishments report collections to be much better and the marketing of this year's crop should improve conditions materially. Business among the retail merchants has been curtailed somewhat by the unusual warm weather for this season of the year.

Our gas send-out for the first half of October shows a 20 per cent increase over the corresponding period of last year and is running very consistent with the previous month; this we attribute in a large extent to the fact that we have not been asked to disconnect any gas services for the winter, while in previous years this month has usually shown a decrease in the total number of gas meters connected.

Our railway receipts continue to show a decrease over the previous year. Our kilowatt hour figures for the month will show a substantial increase over September.

Real estate transfers show an increase over the previous month, yet there is very little building being done aside from several remodeling jobs. Only three building permits have been issued.

There is very little unemployment in Keokuk at the present time, and with industries running at normal capacity we see no reason why this condition should not continue.

During a greater portion of this month we have had unusually warm weather for this season of the year.

MR. J. L. ALEXANDER returned October 20, from the managers' convention held in Boston.

MR. and MRS. W. H. McINNIS returned to Keokuk during the first part of the month from their honeymoon through the West. On October 16, 40 employees of this company tendered Mr. and Mrs. McINNIS a surprise party at their new home, where they were presented a handsome present.

MISS INEZ SEIFERT, formerly railway clerk, and MR. C. C. BUFFUM, light and power superintendent of the Fort Madison Electric Company, were united in marriage at the home of the bride on October 18. After spending their honeymoon in the East, this popular young couple will make their home in Fort Madison, Ia.

For two days, September 30 and October 1, the High Tension Club sponsored an outing in the form of a camp along the Mississippi River, where hunting, fishing and other outdoor sports were enjoyed. Through the courtesy of MR. C. H. HARRIS, of the Mississippi River Power Company, radio concerts were featured during the two days of the camp.

MISS MAUD IMMEGART, bogey clerk, is at present enjoying a month's vacation in California.

OCTOBER 23

#### *Mississippi River Power Company*

MR. C. A. SEARS, manager, accompanied by MRS. SEARS, left for Boston the early part of October to attend the managers' convention.

The flow of the Mississippi here at Keokuk for the last two months has been unusually low, in fact, this is the most prolonged period of low water during the navigation season that we have experienced since the plant has been in operation. There have been no persistent rain falls of sufficient intensity to help out materially on the flow during the past three months. Crops have not, however, suffered particularly, since there have been frequent light showers.

It has been reported that a new excursion steamer entirely constructed of steel, the largest of its kind on Western rivers, will be built by D. N. Wisherd, president of the Wisherd Line Steamers, in the spring of 1923, larger than the steamer *Majestic*

which was burned May 9 of this year. The new steamer will have no inflammable parts as everything will be built of steel. The new boat will probably be 50 feet wide the same width of the steamer *Majestic*, but will be much longer. The *Majestic* was 228 and one-half feet long and eight feet deep.

From Saturday afternoon, September 30 to Monday morning, October 2, the High Tension Club held a week-end outing at the Brewster Cottage located at the mouth of Devil's Creek on Lake Keokuk and about 16 miles north of the power station. There was fishing, hunting, and all kinds of games were provided. The chicken dinner served Sunday was pronounced a great success, in fact, the entire outing was a complete success and greatly enjoyed by all those in attendance.

#### KEY WEST, FLA., OCTOBER 24

Activities in the cigar industry have increased slightly during the past month and at the present time the cigar industry is in better shape than it has been since the latter part of 1920. The cigar output for the month of September was 6,713,483, and the indications are that the output for the month of October will exceed 7,000,000 cigars.

Activities in the sponge and fishing industries are very dull at this season of the year.

Both wholesale and retail merchants report better business conditions at the present time than they have had since 1920; the dry goods and clothing merchants reporting a very noticeable increase in their business during the past month.

The company's business is more favorable at the present time than it has been at any time during the year. The earnings of both the railway and lighting departments are making a very satisfactory showing. We are now getting back on our lines the customers whom we lost as results of the business depression, and expect to have all of the Key West Naval Station business connected on our lines by November 1 that we are going to get from that source. This, together with the old customers that we are now getting back, should make our lighting and power earnings very attractive.

Building activities have been confined largely to repairs and additions to buildings. The total value of permits issued during the past month was approximately \$13,000.

All available cigar makers are now employed, and the cigar manufacturers report a shortage of this class of labor. The construction of sidewalks about the city is furnishing employment for a great many common laborers, there being very few of either skilled or common laborers out of employment at the present time.

MR. J. H. MONTICINO has now recovered from his illness and is back at the office again.

MR. B. L. GROOMS was out of the city for two weeks during the month in order to attend the managers' meeting held in Boston.

MR. A. G. Turner of the firm of Knight, Thompson & Turner, was in the city for a few days during the month in connection with a case in the Circuit Court.

A private line has been built to the Key West Naval Station and electric service is now being supplied to the Radio Station. The remainder of the yard is being converted to A. C. equipment and in a short time this company will supply practically all the service for the yard. The Naval Station power plant will be closed down with the exception of supplying power to the machine shop occasionally.

## LOWELL, MASS., OCTOBER 26

The textile mills continue to show increasing activity, and find no difficulty in obtaining all help needed.

Among the merchants, there appears to be a generally optimistic spirit.

A new furniture store, Moller's, Incorporated, will open on October 31 in the new building erected for its occupancy on Middle Street. The building covers a large area, is of most modern design, and the store promises to be the best equipped of its kind in the city.

The gross earnings of the company for twelve months ending September 30, 1922 showed an increase of more than eight per cent over the previous twelve months. Increased demand on the power station during October to date promises the reflection of increased revenue during the next few months.

The total of appliance sales during September increased over the same month the previous year, and present activity indicates satisfactory business for October.

The number of building permits issued at City Hall during September covered no large construction work and indicates only an average activity in the city. The number of real estate transfers recorded at the Registry of Deeds was 945 for September.

Official ending of the textile strike has not yet been declared, but no difficulty is experienced in securing needed help and nearly all mills are running under full complement of employees.

The railroad strike effecting the Billerica Car Shops seems to have worn itself out, although considered as still in force. Striking employees who have applied for their former position have been taken back if their services could be used, and the situation seems well under control.

The first meeting for the season of the L. E. L. Girls' Sewing Club was held on Tuesday evening, October 3, in the girls' rest room at the Market Street office. Miss GLADYS DODGE, Miss LUELLA JOHNSON, Miss EVELYN LEE and Miss ELVIRA GIPSON were hostesses. Officers for the ensuing year were elected as follows: President, Miss EVELYN A. WILSON; treasurer, Mrs. CALEB ROGERS; secretary, Miss ELVIRA GIPSON. It was voted that the meetings be held every three weeks on Tuesday evening at the girls' rest room instead of at the different girls' homes as formerly. A committee of three was appointed by the president to arrange for entertainment, select hostesses and assign dates for serving throughout the year. The next meeting will be held on October 31.

A son was born on October 18 to Mr. and Mrs. HENRY SHEEHAN. Mr. SHEEHAN is an electrical department employee; Mrs. SHEEHAN was Miss BLANCHE GOSSELIN, formerly of the engineering office.

Mr. WALTER McINERNEY, an electrical department employee, resigned on October 1, to take a position at the Lowell High School as electrician.

A new transformer vault is under construction in the basement of the Market Street office to provide for the transfer of lighting transformers which are now in manholes in the street. The vault is to be of sufficient size to care for increased transformer capacity incident to future growth in lighting and three-phase power in the area adjacent to our office building.

Mr. J. A. HUNNEWELL, manager, has returned from his vacation spent at North Woodstock, N. H.

## MIDDLETOWN, CONN., OCTOBER 19

The Burns Laclede Company is constructing an extensive addition to their plant. The DuBarry Mfg. Co., of Middlefield, has increased their plant materially and

consequently have requested that we supply them with considerable more power. Local wholesale and retail business show improvement.

On October 18 the new 13,000 volt line to The River Feldspar & Milling Company was energized and tested out satisfactorily. This line will take care of an additional load of about 300 horsepower.

The paving of Main Street has been completed, and Middletown now has the finest Main Street in the state. October 20, is the date set aside to celebrate the occasion and a very elaborate program has been arranged.

MR. L. KEEN, formerly manager of this company and now manager of the Ponce Electric Company, was a visitor in Middletown the first part of this month.

MR. A. A. PACKARD, manager, attended the managers' convention in Boston after which he left for Maine to spend his vacation.

On October 7, another one of our informal employees' picnics was held at Guilford Pond. About 50 employees and their families were in attendance. A complete athletic program was arranged, but due to stormy weather very few events were run off. After an outdoor bake the party adjourned to the Rustic Inn for dancing. In spite of the stormy weather a fine time was reported by all.

Two barges of coal were unloaded this month at the station. FRANK DAVIS chief engineer of the power station, is one of those who think and act quickly. During the docking of the first barge several children gathered about the dock to watch the procedure, and a little girl of about ten years of age accidentally fell into the river. Hearing the child's screams, Frank rushed from his office, removing his coat as he ran, and disregarding the danger of the approaching barge, dove into the river and rescued the child. Frank very modestly says, "It was all in the line of duty", but we are all proud of him. Nevertheless, it is often easy to fail to recognize one's duty when there is danger involved.

EMIL OLSON has joined our office force.

HAROLD SELLECK, formerly of the Westinghouse Mfg. Co., is assisting in the engineering department.

#### PADUCAH, KY., OCTOBER 20

The Irvin S. Cobb Cigar Company will build in the near future an addition to their present plant, located at Third and Elizabeth Streets. When the new plant is completed it will increase its force to 200 employees and will make possible the output of approximately 40,000 cigars daily. The Merit Mfg. Co., manufacturers of juvenile suits, have recently added 20 machines to their present equipment, which will increase their number of employees to 125, of whom the majority are women and girls, and increase their monthly output to approximately 2,000 suits. The Priester Hosiery Mills report unusually good business and that their output has gained steadily during the past few months. Employees of this mill, most of whom are girls, now total 275. The new Claussner Hosiery Mill is rapidly nearing completion and expect to begin partial operation about November 1.

In the wholesale trade there is optimism and prospects indicate increased business. All Paducah factories are in operation and full forces are being employed. Automobile dealers are enjoying unusual prosperity, as many new enclosed cars are being sold at this time and in many instances the demand exceeds the supply.

Many retail stores are conducting special fall bargain sales and are making arrangements for special features and attractive displays during exposition week.

Local lumber dealers report a steady gain in output of all building materials and are experiencing some difficulty in obtaining shipments, due to shortage of railroad cars.



The lighting company's balance for reserves and surplus for September was over the bogey, and over the corresponding month last year. The railway company's balance for reserves and surplus for September was also over the bogey and over the corresponding month last year. The sale of \$1 weekly passes continues to show a gradual improvement each week and the total gross earnings for each week shows a considerable gain over the corresponding period last year.

Building activities here continue good, and local contractors state that they have contracts that will keep them busy for several months to come.

Plans are all completed for the annual fall Paducah-McCracken County exposition, which will be held at 10th Street and Broadway, from October 24 to 28. The lighting company is arranging for an attractive exhibit.

Abnormally low water stages have put steamboat service out of commission at practically all points along the Ohio River from Cairo, Ill., to Pittsburg.

An effort is being made by a committee of local business men to change the proposed site of the \$3,500,000 Government dam, to be built three miles above Paducah, to three miles below Paducah in order to insure a pool which will guarantee a stage of nine feet the year around on the Ohio River at this point.

Work is progressing rapidly on the city's new \$500,000 sewer project and materials are arriving more promptly than when work was first started.

MR. A. S. NICHOLS, manager; MR. J. W. McNEELY, railway superintendent, and MR. T. C. GOODMAN, master mechanic, attended the A. E. R. A. convention in Chicago, October 2-6.

MR. B. E. VAN VLIET and MR. W. W. WALTER are making the periodical audit of the books of these companies.

A party of company employees recently held a possum hunt. Two possums and one coon were "bagged." After the chase a weiner roast was held by the light of a huge camp fire. The young ladies of the party had failed to anticipate the rough character of the country through which they were to travel and as a consequence sustained considerable injury to clothing and shoes. This fact failed to dampen the enthusiasm and the party was considered a great success.

MR. and MRS. ROGER GORDON and MR. and MRS. ALLYN HAIGH motored to Mammoth Cave for the week-end of October 7. They experienced constant rain and very rough roads, but report that they are well repaid by the beauties and grandeur of the cave.

MR. J. W. McNEELY has just returned from a business trip to El Paso, Tex. While there he relayed a message from Juarez, Mexico, through the Atlanta radio broadcasting station, which was heard by a crowd of employees of the company and Paducah citizens attending a radio concert at the car barn. These concerts are held at frequent intervals and are well attended by the employees and the public.

MR. A. S. NICHOLS, manager, attended the annual convention of Stone & Webster managers, held in Boston, starting October 9.

MISS MAMIE O'BRIEN, formerly telephone operator at the Broadway office, has become a member of the sales department in the capacity of service clerk. MISS LEEDER has been employed to fill Miss O'BRIEN's place as telephone operator.

MISS ETHEL CROSS, stenographer, has returned from her vacation spent at Memphis, Tenn.

MR. W. E. PERKINS, of the distribution department, spoke to a troop of Boy Scouts, October 13, on the subject of "Safety First."

MR. L. V. SMITH, assistant treasurer, suffered the loss of a son on October 17.

Mrs. Smith is still confined at the Illinois Central Railroad Hospital and is reported to be in a serious condition.

Miss REBECCA MCWATERS, sales clerk, spent her vacation in Chicago during the month.

MR. EARL MCCREERY, electric salesman, has returned from a vacation trip to St. Louis, Mo.

MESSRS. H. R. DALLAM, chief clerk, and HAWLEY C. WILCOX, gas salesman, recently motored to St. Louis to attend the final games of the American League baseball championship.

PAWTUCKET, R. I., OCTOBER 23

*Blackstone Valley Gas and Electric Company*

During the past month local industries report considerable improvement in general business conditions as compared with the past few months.

Plants manufacturing machinery of various kinds are doing a good business and are operating practically full crews.

Cotton manufacturers have shown an upward trend. Manufacturers of all classes of cotton goods are optimistic regarding future business.

Silk and worsted business has improved and mills are reporting good business with fair outlook for future increases.

The situation as a whole in connection with the local industries has shown a marked improvement during the past week or two and we feel that the next few months will show a marked improvement in general business conditions.

Local retail business shows a decided improvement and merchants report a good fall trade. The adjustment of the textile strike has had a beneficial effect on merchants and they now seem more optimistic concerning future business than they were a month or so ago.

The company's business as a whole shows a decided improvement in the past few weeks and indications are that the receipts for the month of October will show a considerable improvement as compared with previous months.

Indications point to a decided increase in the output of manufacturing plants. Our load in Pawtucket has reached 16,850 kilowatt which is about 5,700 kilowatt better than last year, and 1,100 kilowatt better than the previous month.

Our lighting business shows a marked improvement as compared with last year and during the month of September we gained 291 meters. Indications are that the gain in meters will be equally as good during the month of October.

While building has been active in residence sections, no extensions of any size have been undertaken by manufacturing plants. Customers with whom we have talked regarding future building plans indicate that these will be deferred until the spring.

The labor situation has improved, due to mills affected by the strike granting a 20 per cent increase in wages placing the wages on schedule in effect when workers went out last February. The settlement of the textile strike has resulted in increase in output of manufacturing plants and we believe now that it will be a comparatively short time before all mills will be able to secure full working forces.

Approximately 200 members of the Gas & Electric Club attended the second annual meeting and election of officers held in Grand Army Hall on Thursday evening, September 28. Reports of the various officers were read and accepted with much interest on the part of the members present, and tokens of appreciation were shown the retiring officers for their work during the past year. The officers elected for the 1922-1923 season were as follows: President, ROBERT JOHNSTON; Vice-

President, W. T. SHERMAN; Treasurer, RALPH GAUTHIER; Secretary, MISS MARTHA A. ASHWORTH; Board of Governors for two years, JAMES FERRARI and S. CLIFFORD JACOBY. Following the election of officers, light refreshments were served. Dancing until 11 P.M. closed a very enjoyable evening.

MESSRS. GARDNER ROGERS, manager of the electric company, WILLIAM McGREGOR, manager of the gas company, ROLLIN BUCKMINSTER, general gas superintendent and E. S. ROBERTS, sales manager, spent the week of October 9 in Boston attending the Stone & Webster managers' convention.

Much pleasure has been derived by the employees of the gas and electric companies from the new monthly publication called the *Elgasco Record*, which made its initial appearance this month. It is a four-page monthly, and in addition to recording many items of interest in connection with the operation of the two companies, it also gives personal notes and club activities. MR. ROBERTS, sales manager, is editor-in-chief of the publication and is assisted by MR. W. E. CURTIN who is associate editor and handles all news items for the Woonsocket division.

MR. FRANK A. TRACY, recently of the Ponce Electric Company, having returned from his honeymoon, has taken up his work as secretary to MR. ROGERS.

MR. CHARLES E. TRULL, formerly secretary to MR. SPERRY, is now assistant to MR. E. E. NELSON, general superintendent of the electric company.

MR. WILLIAM V. HOLIK, recently of the Boston Statistics Department, joined our Pawtucket engineering department on October 9.

MR. ALBERT CALVERT, of the engineering department, who has been in the hospital here with typhoid fever, is now convalescing and has left with his mother for Long Island where he will spend the coming month.

MISS GLADYS BISHOP, of our service bureau, who left the company on October 15 to be married, was pleasantly surprised at a dinner and shower given her by the girls of the organization at "Mammy's Cupboard" Providence, on October 4. After the supper games were played and Miss BISHOP received many pretty and useful gifts.

MR. B. ALCOTT PRATT, general chief clerk, is spending his vacation in Concord Mass.

MR. C. J. HARVIN, of the Boston office, has returned to Boston after spending several weeks in the Pawtucket and Woonsocket divisions testing station meters.

The MISSES HUNTER, of the accounting department, who have been with us for some time, are leaving the last of October for Nova Scotia.

The Pawtucket Bowling League started its winter season on October 6. The league this year is composed of six teams of five men each and meets every Friday night. While the season has not advanced far, there is a great deal of enthusiasm and friendly competition being shown in the league.

Considerable interest was shown during the summer in the progress of the Gas and Electric Baseball League composed of five teams representing the electric stations, gas works, electric distribution, gas distribution and the main office. Each team had its following of enthusiastic fans, who indulged in a spirit of friendly rivalry and especially so when the outcome of the scheduled games resulted in three teams being tied for the championship of the league. After a post series of three hard fought games the team representing the Tidewater Gas Works won the championship. At the end of the season a picked team was formed and the company is very proud of this team as it came out victor in a series of three games played with the Woonsocket team, and also won the two games played with Fall River Gas Works Company team.

MR. ROLLIN BUCKMINSTER, general gas superintendent, and MR. C. S. HILTON, assistant sales manager, are attending the annual American Gas Association Convention in Atlantic City.

MR. JAMES DUNN, formerly employed as meter repairer for the gas company, has been transferred to the Fall River Gas Works Company.

*Pawtucket Gas Company*

Business conditions are improving every day, and with the settlement of the strike in the textile industries, the majority of the mills have largely returned to conditions as they were last January, the 20 per cent wage cut having been restored. The manufacturers state that orders are being received in greater number.

There has been a tendency in the narrow fabric line to slow up. This is particularly true of the Tamarack Company. The demand for woolen goods has been quiet, but there is a greater demand for all classes of knit goods. The manufacturers of silk goods report that the market is very much livelier, and prices have stiffened considerably. The difficulties that developed in the weaving department of the Green-halgh Mills, as well as that of the Pennsylvania Textile Company, have been ironed out. It is interesting to note that at the Pennsylvania Textile Company they have a full force working on a full time schedule daily. The demand for hosiery is very active, and manufacturers of fancy textiles report very excellent business.

The retail merchants report a considerable betterment in the volume of merchandise sold.

So far in the month the output of gas has shown a decided increase as compared with last year, last week showing an increase of 20 per cent in the output.

Much activity characterizes the building trade, and there is a demand for carpenters and laborers since the settlement of the strike. They have been handicapped to a certain extent, due to insufficient building material on account of freight congestion.

Unskilled labor is scarce, it having been necessary for local coal dealers to increase their rates paid to the coal carriers in order to enable them to hold sufficient men to deliver the coal which they are receiving, and all things point to the fact that labor will be well employed for some time.

PENSACOLA, FLA., OCTOBER 26

The American Agricultural Chemical Company has commenced full operation of their large plant at Goulding, a suburb of this city.

The Bruce Dry Dock Company has not been as active during the past month as previous to that time, and have found it necessary to cut their forces to a certain extent. It is a very unfortunate situation that under present Shipping Board orders practically all of the vessels coming into the gulf ports for repairs are sent to Mobile, Ala. This action of the Shipping Board is having a very depressing affect on business which should naturally come to Pensacola port industries.

Wholesale merchants report a satisfactory business in the territory tributary to Pensacola. Retail merchants report that business during the past month has been better than was expected.

There is no change in the condition of company's business from that reported last month. The power station output is such as to assure us that our estimates made in recent communications were not over-drawn and that the light and power business for the remainder of the year will quite exceed our estimates. We expect this satisfactory business to continue for sometime in the future.

Freight business has begun to pick up with the starting of work on the contract for the flying field at the Naval Air Station. Rolling stock shortage is still affecting our freight business in some lines and this condition appears to be getting worse instead of better.

The San Carlos Hotel changed hands during the past month and became the property of Mr. W. B. Harbeson, a very prominent lumberman and capitalist of West Florida. It is generally considered that Mr. Harbeson will develop very greatly Pensacola as a tourist resort, and it is considered fortunate for Pensacola and the hotel that the change was made.

Employment conditions as a whole are showing steady improvement and common labor is not so easily secured as during the past summer.

Mr. C. L. SHINE, who has been our claim agent for a number of years, was married on October 17 to Miss LILLIE TAYLOR of Pensacola. Mr. and Mrs. SHINE will spend two weeks at Tate Springs, Georgia, after which they will take a long automobile trip through the Blue Grass region of Kentucky. Mr. and Mrs. SHINE are both extremely popular in Pensacola and their many friends wish for them all the happiness to be hoped for.

Mr. and Mrs. W. H. ROY announce the birth of a daughter. Mr. ROY is a member of our accounting department, and has been with the company for several years.

Mr. HARRY SHARPLESS, chief engineer is making an automobile trip to Baton Rouge, La., on his vacation. Mrs. SHARPLESS left Pensacola several weeks ago to spend a short while at her old home in Tampa.

Mr. J. E. MURRAY, formerly of Reno, has come to Pensacola to take the position of assistant treasurer, succeeding Mr. W. B. ANDERSON who resigned in September.

Mr. C. F. JOHANSEN, assistant treasurer of the Tampa Electric Company, spent a month in Pensacola as acting assistant treasurer during the time between the resignation of Mr. Anderson and the arrival of Mr. MURRAY. Mr. JOHANSEN is an old Pensacola boy and his stay in Pensacola was in the nature of a vacation for him.

Mr. ALBA H. WARREN, of the El Paso Electric Railway Company, at one time manager of this company, spent a short while in Pensacola on his return to El Paso from the Boston convention.

MESSRS. FRANCIS and POWELL are engaged at this time in making the annual audit of the company's books.

#### PONCE, P. R., SEPTEMBER 27

Owing to this being the off season for sugar, tobacco and coffee, which comprise the principal industries of this island, industrial and commercial activities are very low, but it is expected that there will be a favorable change during the next few months, as one of the largest cigar factories in this community will reassume the manufacture of cigars although on a reduced basis. Also several hand-made blouse shops have increased their weekly output of blouses and to that effect over 1,000 girls are being employed.

While conditions as aforesaid prevail, wholesale business will be poor, as practically the most important wholesale shipments are of these products. The retail business, however, has improved somewhat recently.

Business inactivity has, to some extent, affected our commercial lighting business, as a large number of small stores have been compelled to close. On the other hand, residential lighting business has increased quite a little, which probably is

due to people staying at home evenings rather than seek some sort of amusement which would cause the expenditure of money.

The outlook of the company for the future is encouraging, as the resumption of the manufacturing of cigars and the sugar and coffee crops will greatly improve present conditions.

Quite a number of small houses are being built in the outskirts of the city. With the exception of one bank building and one commercial house there is no other important building going on.

Most of the people who moved to the country while the schools were closed have returned to the city as the school term has commenced, and as a consequence, there are less houses vacant, although the most expensive ones are still unoccupied.

Common labor rates are still low, and it is expected that laborers will be paid \$1.00 a day for this year's sugar and coffee crops.

There has been quite some rain during the last week, which has considerably aided the irrigation of fields dedicated to the cultivation of sugar, coffee and other products of minor importance. This rain has filled the rivers and has induced the planters to cultivate more land.

MR. LEWIS A. KEEN, manager, left for the States, September 27, to attend the managers' convention which will be held in Boston during the early part of October. He expects to return about the middle of November.

MR. R. A. LANDRY arrived from the Boston office to take the position of engineer at the power plant left vacant by MR. R. C. PAINE, who was compelled to resign due to illness of his mother in the States. MR. PAINE left September 20.

On September 4, Labor Day, the company gave its employees an outing to which all those who were not on duty participated. Many of the employees took part in the athletic events carried out during the day, and afterward they were served a very succulent meal which everyone present enjoyed. This outing took place on the lot which the company owns in the rear of the power station.

#### RENO, NEV. OCTOBER 23

The Southern Pacific Company reports that the past month has shown the heaviest freight traffic over this division in the history of that company.

There has been no change during the past month in local retail business conditions.

No decision has as yet been received in the gas rate case, and no indications of any decision in the immediate future have been given. Recently the company's attorneys called the attention of the Federal judge to handling the case to the effect that the Government's index of prices has increased 13 points since the case was heard. It is hoped that this letter may stir the judge to some action.

During the past month returns from all departments were decidedly encouraging. The United Comstock Mines Company, the company's largest power customer, is almost one full month ahead of its operating schedule as contemplated by the company, which has resulted in an increase in gross earnings of over the expected amount for this month. All the other large power customers continue to operate at full capacity, with the result that the total requirements of the system have increased 500 or 600 kilowatts over the September maximum.

Negotiations are under way having as a possible result the securing of a new cement plant as a power customer. This plant, if served with power by the company, should result in a large increase in revenue.

The real estate market continues dull with a number of houses offered for sale at what is considered by prospective buyers, excessive prices. Rent houses are very difficult to obtain, and, where obtainable, bring annual rental beyond the reach of the average person.

The past thirty days has brought a continuation of the drought mentioned in the last month's letter. With the exception of a light storm early in the month, there has been no precipitation at all. However, the water supply furnished by last year's snows is still ample for both power and irrigation purposes, and undoubtedly will be sufficient to last until the winter storms.

On October 18, Mr. JAMES E. MURRAY left Reno for Pensacola to assume the duties of assistant treasurer at that place. Mrs. Murray accompanied him as far as Austin, Texas, where she will remain for a few weeks visiting her parents. This event was met by this organization with the mixed emotions of pleasure at Jim's promotion and regret for his and Mrs. Murray's departure. These emotions found expression in the gift of a very handsome watch. Mr. IRVING L. STINE has succeeded Mr. MURRAY as chief clerk, Mr. CHARLES W. FAIR has succeeded Mr. STINE as general clerk, Mr. LESTER ODAMS has succeeded Mr. FAIR as cash clerk and Mr. PAUL MURDOCH has succeeded Mr. ODAMS as ledger clerk.

Mr. GEORGE A. CAMPBELL, manager, is attending the managers' convention in Boston.

Mr. W. W. MASON, accompanied by his family, is spending his vacation at a beach resort near Los Angeles.

Mrs. FREDDIE GLIESSMAN, who as Miss FREDDIE HILP was employed for several years by this company, has rejoined our organization as cashier. Mrs. GLIESSMAN resigned in 1919 to go over-seas as a Y. M. C. A. canteen worker.

On October 20, company parties were resumed for the winter, the usual program of speaking with dancing and cards afterwards being followed. Mr. HENRY H. CARPENTER gave the principal talk of the evening and short talks were given by MESSRS. WENTWORTH and SEABORN.

#### SAVANNAH, GA., OCTOBER 25

There has been no decided change during the month in the general industrial situation in Savannah and vicinity. The activity in the fertilizer industry continues with practically all the plants in operation. One of the cotton mills closed down temporarily during the month due to lack of seed. All of the oil mills are now running and it is expected that the Southern Cotton Oil Company will shortly begin operation of its peanut mill. The sugar refinery has continued in operation during the month, but during the next two months it is expected that it will curtail operations considerably.

During the month of September, 80 ships entered the port of Savannah with a total tonnage of 216,325. Of this number of ships 61 were American with a total tonnage of 166,412.

The custom receipts for September, 1922 amounted to \$807,608 showing a considerable increase over those of August which were \$697,412.

The cotton exports from Savannah since August 1, 1922, were 97,184 bales in comparison with 190,946 bales for the corresponding period last year.

In naval stores exports the shipments of turpentine since April 1, 1922, amount to 19,459 casks of turpentine in comparison with 28,393 casks for the same period in 1921, while the exports of rosin since April 1 were 129,273 barrels as compared to 100,066 barrels during the corresponding period last year.

Since September 1, 1922, a total of 10,227,000 feet of lumber has been shipped from Savannah, of which amount 1,292,000 feet were shipped to foreign ports.

Announcement has been made that the Fuller Brush Company of Hartford, Conn. will use the port of Savannah as a distributing point through the Southeastern states. The company will establish a warehouse here and will carry \$200,000 worth of stock.

The cotton market continues steady, and shows an advance in prices as compared with the quotations of a month ago. The gross receipts of cotton since August 1, 1922 amount to 175,880 bales in comparison with 267,249 bales for the same period in 1921.

The naval stores receipts for the month of September, 1922, amount to 12,944 casks of turpentine and 42,749 barrels of rosin. The naval stores receipts since April 1, 1922, amount to 77,781 casks of turpentine and 242,020 barrels of rosin in comparison with 76,005 casks of turpentine and 213,031 barrels of rosin for the corresponding period in 1921.

The local, wholesale and retail merchants report business as very unsatisfactory and state that there has been very little improvement during the month.

The Birney safety cars continue to operate satisfactorily on the A. & B. Belt and Habersham Street Lines, although no marked increased riding has been noted on these lines during the month other than that due to the opening of the schools.

Although our generating plants output thus far this month is slightly less than for the corresponding period in September, the production for the first 24 days of October, 1922, shows an increase over the corresponding period in 1921, and indications are that the net generated for the month will exceed that of October, 1921, a considerable amount. The decreased demand for power by the ice factories has been offset by increased consumption of the fertilizer plants and oil mills. The outlook for the light and power department for the next few months is bright, although it is expected that the sugar refinery will cut down operation temporarily in November and December, as is usually the practice during that period.

Several valuable real estate transfers have been made during the month, but building activities seem to have slackened up somewhat as fewer permits have been issued. However, there are still quite a number of new houses under construction. It is announced that the Savannah Creosoting Company, which has a plant at Port Wentworth, is preparing to let a contract for about \$50,000 worth of improvements. These improvements will include a new wharf and new trackage facilities.

During the month of September 1922, 56 building permits were issued valued at \$84,979. This is in comparison with 69 permits issued during September, 1921, valued at \$102,840.

The number of unemployed in Savannah has been reduced somewhat because of the activity in the fertilizer industry, and the increased operation of the cotton oil mills, but labor of all classes continues to be plentiful.

MR. P. R. WILLIAMS and MR. A. DAGGETT of the auditing department completed the audit of this company on October 11, and left for Tampa, Florida.

MR. H. C. FOSS, district manager, and MR. R. C. BROOKS, manager, have returned from the managers' convention which was held at Boston, Mass.

There was a large attendance at the October meeting of the Savannah Electric Benefit Association which was held in the Casino at Thunderbolt on October 4. A very pleasing program was given which had been arranged by MR. L. F. REIGEL, sales agent. Among the numbers on the program was a vocal selection by Miss ATKINS and Miss HILL accompanied by Mrs. HARMON MEYER at the piano. Miss



ATKINS and Mrs. MEYER are daughters of Mr. ATKINS, chief engineer at our power plant. After the entertainment dancing was enjoyed, music being furnished by Rabey's Orchestra.

The district convention of the Kiwanis Club was held in Savannah on October 19 and 20.

The Connective Club, an organization composed of several employees of the line, plant and installation departments, held its meeting at Ambos' at Thunderbolt on Friday, October 13.

MR. HARDY CROOM arrived in Savannah on October 21, and will take up his residence in this city. MR. CROOM will be connected with the district office, and will engage in special work in connection with the companies of this district.

MR. B. E. MILLIKEN, of the Pensacola Electric Company, paid us a short visit during the month.

MR. ALEXANDER WATSON CORDES, JR., of the accounting department, announced the birth of a son, Alexander Watson Cordes, 3rd, on October 19.

MR. B. T. LONGINO, of the Columbus Electric and Power Company, spent several days in Savannah during the month in attendance at the district convention of the Kiwanis Club.

The Savannah Tri-State Exposition was held at the Fair Grounds during the week of October 23 to 28.

#### SEATTLE, WASH., OCTOBER 23

Lumber continues excellent. The cut continues to be in excess of normal and shipments for the month of September were 60 per cent greater than for 1921. California and the Atlantic coast register the heaviest gains, with a pronounced increase in box shooks.

Local fishing conditions are not particularly good, salmon being very poor. The Alaska salmon pack continues to show up better as more complete returns come in. The halibut catches are good and the price is increasing.

Fruit crops, this year, were excellent, but the success of the apple crop depends entirely on the ability of the growers to obtain refrigerator cars, which to date has been very difficult.

Conditions at the local coal mines are excellent.

Both wholesale and retail business show a steady but slow improvement, with retail trade probably leading.

Announcement made this week by the United States Chamber of Commerce states that, based on the sales efficiency measured in terms of turn-over, Seattle stores lead all cities on the Pacific Coast, with the exception of Los Angeles, with which it is tied.

The Company's business showed a slight increase for the month, and indications are that this will continue.

Real estate is quiet, with only one or two large sales being recorded. Building continues excellent, with no seasonal let up.

Labor conditions are good, with demand for practically all classes exceeding supply.

To help the financing of extensions to the company's plant, an issue of 2,000 shares of six per cent cumulative preference stock is to be made through the company offices of the Puget Sound district. This issue is considered attractive as it is sold at \$85 a share and is callable at \$125 a share. It is preceded only by the company's bonds and a comparatively small issue of prior preference stock. Dividends are

payable quarterly. The present sale is limited to subscriptions received up to and including November 14.

Mr. D. N. KING, tax and insurance agent, spent several days in the Northern Division, making his annual inspection of company property upon which insurance expires at the end of the year. During his absence, he visited Bellingham, Mount Vernon, Burlington, Sedro Woolley, and Everett.

W. H. McGRATH, vice-president, attended the managers' convention in Boston, returned on October 23.

Mr. E. H. THOMAS, publicity agent, has been in the northwest part of the state and in the Gray's Harbor section on business.

Mr. C. H. STROOP, assistant treasurer, and Mr. M. E. WILLIAMS, of the treasury department of the Bellingham Company, were in Seattle on the 23rd., in conference with F. W. BROWNELL, comptroller, in regard to interurban accounting.

#### SYDNEY, NOVA SCOTIA, OCTOBER 23

During the past month or since September 23, general business conditions have continued to show steady improvement as was anticipated at that time.

On October 10 the executive officials of District No. 26, United Mine Workers of America, together with officials of the British Empire Steel Corporation, representing the coal mines in Nova Scotia, signed an agreement covering working conditions and wages already agreed upon during the early part of September. This contract was retroactive to July 15, 1922 and will not expire until January 15, 1924. In spite of the fact that the Nova Scotia miners who went on strike August 15 did not return to work until September 7, the output of the Dominion Coal Company, Limited, in the Glace Bay District during September was 278,583 tons as compared with 273,049 tons in September, 1921, 149,917 tons in August, 1922, and 314,603 in July, 1922. Coal shipments up the St. Lawrence, and to a much lesser extent for American ports, have continued limited only by ships easily available, loading facilities and coal output.

A comparatively new coal mine recently owned by Mr. Vincent McFadden has just been sold by him to Mr. George B. Burchell, managing director of the Bras d'Or Coal Company, Limited.

Operations at the plant of the Dominion Iron & Steel Company, Limited, in Sydney have been steadily increasing until at the present time there are well over 3,000 men employed, with a daily payroll in excess of \$12,000. Two blast furnaces which are in operation have three times during the present season broken all previous records. On Wednesday, October 18, they turned out 771 tons of iron, as compared with the previous high record of 665 tons, made one day in December 1921. On the same day, October 18, 1922, No. 1 blast furnace broke all previous records for a single furnace with an output of 456 tons of iron.

The Grand Trunk Railway have recently placed with the Dominion Iron and Steel Company, Limited, an order for 25,000 tons of 100 pound rails for spring delivery. Further orders from the Canadian National Railways and probably the Canadian Pacific Railway are expected. The Rod, Wire and Nail Mills have been operating at capacity. A new galvanizing frame is now being constructed at a cost of \$50,000 so as to permit of 120 tons of galvanized wire being turned out per day instead of 60, which is the capacity at present.

A steamer was recently loaded in Sydney Harbor with 1,800 tons of pig iron consigned to Philadelphia. On the same boat there was shipped 400 tons of wire rods for New York, which is to be reshipped to Vancouver.

President Wolvin of the British Empire Steel Corporation has just announced that it is probable a third blast furnace will be blown in shortly.

Resumption of work at the coal mines and steel plant has improved both wholesale and retail general business to a marked extent. On September 16 approximately \$100,000 of back pay was distributed to the miners of the Glace Bay District, and on September 28, about \$30,000 of back pay was distributed to miners and employees of the Nova Scotia Steel & Coal Company, Limited, at North Sydney, Sydney Mines, Florence and Little Bras d'Or. This, together with increased pay and steady work, has naturally stimulated business throughout the whole district.

During the month of September the Cape Breton Electric Company, Limited, suffered a loss in gross earnings as compared with September, 1921. Through the strictest economy and with every employee loyally co-operating, expenses were materially reduced, making the net earnings better than last year.

For the first 20 days of October, earnings of the railway department are approximately 10 per cent greater than for the first 20 days of September, 1922. During the same period the ferry department earnings were slightly higher than in September.

September was the second month in 1922 to go over the \$100,000 mark for building permits and it is expected that the total building in 1922 will exceed that of the year 1920, to say nothing of 1921; \$114,000 has already been expended for construction of homes under the Housing Act.

Employment conditions have been steadily improving and there seems to be no marked shortage of labor at the present time.

The morning of Thursday, October 19, saw the ground covered with snow, which, however, melted during the forenoon. The last few days have been exceedingly cold and wintry.

MR. C. C. CURTIS, manager, returned October 18 from Boston, where he attended the managers' convention.

MR. R. B. WOODILL, manager's clerk, has left the company in order to take an engineering course at Dalhousie University.

MR. F. P. HEALEY, of the accounting department, left our employ on October 1.

MR. T. N. PAYNE, superintendent's clerk, spent his vacation in Halifax visiting his parents.

MRS. G. L. BAKER, who has been with this company for the past three years as stock and line clerk in the superintendent's office, left our employ during September and is at present residing in Toronto.

MR. CHARLES ROBERTSON recently entered our employ as power house clerk.

#### TACOMA, WASH., OCTOBER 23

Local banks report collections good so far as large operators are concerned. Some loans have been slow in coming in and there have been several calls for renewals, although the volume is not great. Savings accounts suffered somewhat during July and August, largely as a result of strike in railroad shops. However, a gain was noted in the savings as a result of new employment the last few weeks. Conditions, generally, are good. Lumber is in good demand and prices firm.

Congestion on eastern railroads has brought about an unprecedented car shortage in the West and there is no immediate hope of a return to a satisfactory operating performance.

The Tacoma Lumbermen's Club has raised a fund of \$25,000 to advertise Tacoma as the "Lumber Capital of the World."

On account of the Todd Drydock & Construction Corporation of Tacoma

securing contract for the building of a passenger vessel for the Alaska Steamship Company to cost approximately \$1,000,000—350 men have been added to the payroll of the company.

Site has been selected for Tacoma's community hotel and it is anticipated that construction work will be commenced early in March, 1923.

Travel to Mount Tacoma for the 1922 season showed an increase of 25 per cent over previous high record in 1920. Every state in the union was represented by visitors as well as 12 foreign countries and four United States territorial possessions.

Retail trade continues to hold the advantage of stimulated sales. Wholesale business is in good volume. Predictions for good business volumes for fall and winter are made generally by the trade.

Coal production in the mines of Washington is increasing steadily. Union mines are now operating with approximately full crews. Non-union mines are running on a basis of about 18,000 tons per week, which is said to be just about what market conditions require.

Tacoma's new building valuations for 1922 will greatly exceed those of last year.

Further indication of an increased stability in all lines of business is evidenced by the fact that many requests are coming in from firms in various lines of business for long term leases. The new hotel will cause several changes in locations for various firms and will create some little activity in store rentals.

Construction work has started on the rebuilding of the Puget Sound Electric Railway terminal building in Tacoma, for the use of the Puget Sound Electric Railway and Thompson & Smith Transportation Company's line of busses operating between Tacoma and Olympia. The estimated cost of the work is \$20,000 and it is planned to have the building completed before the end of the year.

The weekly pass has been in effect on the Tacoma Railway and Power Company lines for 13 weeks—and each week's returns have shown an increase over the previous week. The total sales for No. 1 pass amounted to 7007—while those for the No. 13 pass amounted to 10,151, which shows the popularity of the pass in Tacoma.

MR. L. L. LAMB, general shop foreman of Tacoma Railway and Power Company, has returned from the American Electric Railway Association convention held in Chicago this month.

HOWARD NEILL and G. L. BAKER, traveling auditors, are making an audit of the books.

MR. O. O. RUTLEDGE has been appointed representative of the Puget Sound Power & Light Company at Puyallup and Sumner. Prior to this appointment MR. RUTLEDGE was in the train service of the Puget Sound Electric Railway for 13 years and his record has won for him not only the recognition and esteem of the company but the good will and friendship of the people of Puyallup and the Valley.

The Puget Sound Power & Light Company is building a lighting extension into the Mountain View district near Puyallup.

The Western Washington Fair at Puyallup closed the most successful meet in its history this month—the week's attendance being over 150,000. The Puget Sound Power & Light Company sent out over 7,000 invitations to employees and friends to attend Electric Night at the Fair—the company being featured in the horse races, fireworks and other special stunts.

MR. GEORGE SNIDER, purchasing agent, and MR. GEORGE LEVENHAGEN, storekeeper, attended the meeting in Everett this month for purchasing agents and storekeepers of the Everett, Bellingham, Seattle and Tacoma properties.

MR. GEORGE W. ROUNDS, general superintendent of transportation, has returned from a visit in the East. MR. ROUNDS also attended the American Electric Railway Association convention in Chicago.

TAMPA, FLA., OCTOBER 23

The cigar industry continues to be flooded with orders, and there is work for every factory. There is still a shortage of cigar makers.

Several retail merchants report that the month of September was the first month in which their volume of sales exceeded those of 1921. They are all optimistic over the fall season's business.

Our prediction of September 21, that our decreases would gradually be wiped out in the railway department, seems to have been well founded, as there was considerable reduction in the percentage decrease in the month of September.

In the lighting department we are again showing a substantial increase being approximately 14 per cent in September, with an unusually large number of cut-ins for new customers.

The labor supply is plentiful.

Stone & Webster, Inc., Division of Engineering and Construction, MR. F. G. DANA, local superintendent, has started work on the high tension line between Tampa and Plant City. This line is being built to serve the Plant City Public Service Company, a corporation furnishing light, power and ice to residents of Plant City. Other smaller communities between Tampa and Plant City will also be served by this line.

While attempting to swim a short distance to shore to obtain assistance for a party of friends who were adrift in a boat without oars, MAJOR OSCAR CARROL, eighteen-year-old assistant stockkeeper, was drowned in Hillsborough Bay on Saturday afternoon, October 7. A large number of employees immediately began searching for the body but it was not recovered until early Monday morning. MAJOR was an exceptionally bright, industrious young man and very popular with all members of our organization. He is survived by his mother, two sisters and one brother, the latter being our present office boy.

Mrs. Millie Craft, wife of CHESTER L. CRAFT, train-master, died September 22 after a lingering illness. Besides her husband, she is survived by two small children.

MR. C. W. EDWARDS, superintendent of transportation, was married to Mrs. Bertie L. Bigelman on October 5.

MR. WILLIAM L. JAY and MR. GERALD CUSHMAN have been employed by the accounting department during the past month.

MR. P. R. WILLIAMS and A. H. DAGGETT, of the auditing department, are now in Tampa making the yearly audit of our books.

MR. T. J. HANLON, JR., has returned from the street railway convention at Chicago and the managers' convention at Boston. On the way back MR. HANLON was joined at Jacksonville by Mrs. Hanlon and their two children, T. J. 3rd, and Blanche, who were returning from a summer vacation in northern Michigan.

WOONSOCKET, R. I., OCTOBER 23

There has been some increase in the operation of local cotton mills during the past few weeks, and it is thought that the general improvement in this business would continue to be reflected in local manufactures.

The woolen and worsted business, as is usual at this season of the year, is producing on full schedule, and local mill men feel very optimistic regarding production for some months to come.

Business is very poor in local machine shops and textile machinery manufacturing plants. The Woonsocket Machine and Press Company is operating about 25 per cent of normal and the Taft-Pierce Manufacturing Company about 65 per cent of normal.

Local wholesale and retail merchants report business as good.

The increased activities in the local textile mills has caused our power output to practically return to normal, and this, together with the gradual coming on of new business contracted during the year, has resulted in a material increase in maximum station demands. We have been advised by Mr. McDonald, of McDonald Bros. quarry that they have practically decided to accept our proposition for line extension for power sale, and we expect a definite answer shortly. The Shambow Shuttle Company has advised us that they will make some increases in load, but this will probably be handled by our present transformer installation.

Our campaign on gas and electric irons ended on October 10. This campaign started on August 19, and during this period a total of 444 electric irons and 267 gas irons were sold.

The Rhode Island Knitting Company has completed plans whereby it will add a new building to its plant. This building will be 40 by 100 feet and work on same will be started within a week or two. We have interviewed a representative of this company and are reasonably sure that they will use our power throughout and will also install a gas steam boiler to supply steam for process work.

The local Greek element are contemplating the building of a church at the corner of East School and Elbow Streets. This building will be about 34 by 55, and will cost about \$16,500.

The deciding baseball game between the teams of the Pawtucket and Woonsocket divisions was played off in this city, September 22. The Pawtucket aggregation evidently hypnotized our boys, for only one of our players saw home plate while five Pawtucket boys scored.

MR. W. C. CURTIN, of the industrial service department, attended the convention of the Illuminating Engineering Society, held at Swampscott, Mass., September 26, 27 and 28.

MR. EDGAR L. GRANAU, student engineer, arrived during the month from the statistics department of the Boston office.

The work of repairing our club room, damaged by fire, June 10, is nearing completion. It is expected that the rooms will be ready for the opening of the club activities the latter part of the month.

MR. GEORGE L. DAVIS, who has been in the employ of the company 12 years, resigned his position as paymaster, September 30, to go into business for himself.

MR. WILLIAM BUCKLEY has joined the organization as clerk in the distribution department, filling the place of MR. RALPH STINSON, who has been made paymaster.

MR. J. M. HARLEY, station engineer, has returned from his vacation.

MISS CATHERINE E. O'NEIL, telephone operator, was married to Mr. Joseph W. Flynn, at Millville, Mass., October 3. Mrs. FLYNN will continue her duties with the company.

MR. WILLIAM FANNING has been employed by the company as appliance repairman, to fill the place of MR. WILLIAM WHEELLOCK, who has been transferred to the testing department as meter tester.

MR. EDWARD C. TUIITE, of the sales department, is now convalescing at his home, to which he has returned from the Peter Bent Brigham Hospital of Boston.

MR. E. L. MILLIKEN, assistant manager, attended the managers' convention held in Boston, Mass., October 9 to 13.

MESSRS. J. C. HARVIN and B. C. LUTHER were with us during the month calibrating the meters at our No. 1 station.

MR. and MRS. CLARENCE E. CONKEY announce the birth of a son, Robert William, on October 21.

E. L. MILLIKEN, assistant manager, was recently elected chairman of the Woonsocket Chapter of the American Red Cross.

## Library Notes

### Aftermath for the Managers

By G. W. LEE

**A** PROPOS of "sponsorships" for different managers, let me illustrate by the sponsorship for correct English. Dr. Francis K. Ball, of Ginn & Company (who will bring out his "Constructive English" next spring), is sponsor for this subject. I have submitted many a puzzling question to him while the manuscript was in process; and he is supplying me with galley proof from which I can announce some of the problems that this book will settle. We have in our library collection about thirty books to refer to for correct English, but not one of them seems to satisfy the majority of questions bearing on the language that are asked of us. Dr. Ball's book, however, promises to supersede nearly all of these books, for our purposes at last. Note also that Dr. Ball, as sponsor, serves as a personal source of appeal, after reasonable effort has been made to get satisfaction from other sources.

Referring to various of the sections in the galley sheets I want to mention briefly some of the points that are covered, though there is not room to quote the rules or explanations.

No. 27. *Plurals* (Nos. 24-39). Nouns in "full": Give me two *teaspoonful* of cream. ("Two teaspoons full of cream" means "two separate teaspoons filled with cream.")

No. 34. Compound nouns: Knights Templars, Notaries Public.

No. 35. Letters, figures, signs: "k, k's, 3, 3's;—,—, 's; if, if's; I O U, I O U'S."

No. 37. Proper names: Davis, *Davises*; Marx, *Marxes*.

No. 38. Proper names with titles: Miss Thompson, the, *Misses* Thompson, (formal style, as in addressing a letter-544, II); the Miss *Thompsons* (informal style, as in conversation.)

No. 39. Foreign nouns: Exponents in mathematics are called *indices* (in di-sez); the tables of subjects at the ends of books are usually called *indexes*.

No. 41. Possessive case: *Francis's*, *Judas's*, *Lewis's*, *Louis's*, *Marcus's*, *Harry Moses's*, the *princess's*, *Venus's*.



No. 42. Exceptions to rule: *Conscience in for conscience' sake.*

No. 63. Mistakes in case: There is nobody here but *I* [O.K.]

No. 72. Demonstrative adjectives, "this kind," etc.: This *kind* (or *sort*) of men *are* hard to please.

No. 78. Case: But *who* say ye that I am?—Matthew, XVI, 15 (Revised Version). (Predicate nominative after *am*).

No. 87. "Whose"; caution: A *religion whose* creed they do not understand, and whose precepts they habitually disobey.—Macaulay. (*Whose* is proper here because of the personal element in the antecedent.)

No. 108. "Any one" etc.: We should urge *everybody* to do *his* (not "*their*") part.

No. 120. Verb with "each," "every" etc. *Everybody* has *his* troubles. (Not "*their* troubles.") EXCEPTION: *Each* (or *every* ten girls *elect* a leader.)

No. 137. Misuse of superlative: They soon get the *better* of us. (Not "*best*.")

NOTE: In a few old expressions the superlative is still in good use for the comparative:

He was evidently putting his *best* foot *foremost*.

No. 178. Shall, will, of simple futurity. [Much space is given to the shall and will series.]

No. 195. [Particularly important]. Shall, etc., in direct quotation, etc.: She often told him that she *should* be glad to help him. (I *shall* or *should*.)

No. 197. Verb with collective noun: The public is *alive* to *its* wants. The *public are* admitted on Wednesday.

No. 215. Verbal nouns. [The infinitive and the Gerund. Many sections are given to the subject.]

No. 220. Wrong tense of infinitive: I intend *to see* you. (Not "*to have seen*.")

No. 223. Gerund modified by adjective, etc: Have you heard of *his coming* home? (Not "*him coming*.") Have you heard of *Henry's coming* home? (Not "*Henry coming*.")

No. 225. Gerund and participle distinguished: They insist that something be done. Not "*insist on something being done*." It prevented the question from being raised. (Do not omit *from*).

No. 226. Gerund for progressive passive: Forty and six years was this temple in *building*.—The Bible. The book is now *being printed*. (Or, *is now printing*.) We stayed with him while our house *was being built*.

And so on.

I have seen the table of contents and a portion of the index, and they are splendid. The book should be epoch-making. Ask me more about it, if interested, and about the working of sponsorships of the Extension Service, with the Boston Public Library as community headquarters.

Another important sponsorship is that for the subject of *Post Office Addresses* (in addition to the committee work of the Special Libraries Association of Boston on Societies Address Lists.) This is the sponsorship of Mr. C. W. Hawkes, of the Sampson & Murdock Company. The availability of students of Engineering 80, Harvard, for doing useful work for practice, means a good deal in connection with the subject of Post Office Addresses. Ask me more about this student work, as it has large possibilities for Stone & Webster managers.

The Franklin Union has issued a pamphlet on *Evening Classes*, 1922–1923. It has, for instance, a three year course on Industrial Electricity, and a Saturday afternoon course on Industrial Electricity; also a three-year course on Structures and Building Construction. Such courses mean a good deal to various members of our organization; and the subject of *Educational Opportunities* is another for which we are establishing a sponsorship in connection with the Extension Service.

The *Foreign Commerce* Department of the Chamber of Commerce of the United States, has issued a *Handbook* for 1922–1923. There is room here only to mention some of the headings of suggestive value to our organization: Directories, Maps, Postal Facilities, Statistics, Translations, and many others, arranged in convenient alphabetical form. This handbook furnishes a good example for the treatment of many different subjects.

The Bureau of Commercial and Industrial Affairs of the Boston Chamber of Commerce has issued a handbook entitled "*Boston, an Old City with New Opportunities*." This is

suggestive of the Foreign Commerce Handbook issued by the Chamber of Commerce of the United States. It is easy to guess the general contents, which have to do with the strength and continuing growth of Boston and New England. Would that it were indexed or had a table of contents. Likely, however, it is a forerunner of what will prove to be an annual edition. Its map of the district around Boston, with population figures, and its folder map of Boston port and harbor facilities, both should be appreciated.

"*Ratio and Percentage Tables as applied to Analysis of Financial Statements of Public Utility Companies*" is a twenty page book in pasteboard covers, sold for \$2.00. Its tables cover gross earnings, investments, depreciation, etc. It was copyrighted in 1921 by Albert F. Henderson.

The Municipal Reference Library Bulletin of St. Louis, June, 1922, tabulates the *Certain Officials of 143 Cities in the United States and Canada*. This includes the names of the following: City; Mayor, Commissioner, or Manager; Comptroller, Treasurer or Auditor; City Clerk; City Attorney or Counselor; City Engineer; Water Commissioner; Superintendent or Manager; Health Commissioner or Superintendent; Chief of the Police Department or Marshall. The figures after the name of the Mayor indicate the year, or month and year of the expiration of his term of office. "Usually all elected officials of a city are chosen at the same time. Where there is a variation and the information was furnished, it has been noted."

The Annals of the American Academy of Political and Social Science for September deals with *Industrial Relations and the Churches*. It is, of course, a symposium, and is on important topics, as suggested by the following, from the table of contents: An Employer's View of Property (Henry S. Dennison, President, Dennison Manufacturing Company, Framingham, Massachusetts). The Employers' Responsibility to the Community (Sam A. Lewisohn, member of the firm of Adolph Lewisohn & Sons). Labor's Responsibility to the Community (Joseph Husslein, S. J. Ph.D., Associate Editor, America.)

The supplement deals with the study of labor mobility by The Industrial Research Department, Wharton School of

Finance and Commerce, University of Pennsylvania. The need for *personnel research* in the scope and aim of the *Industrial Research* Department is covered in the introduction, while the text to the supplement deals largely with labor turn-overs.

"*Office Management: a Constructive Monthly Magazine on Business Methods*," is the result of splitting the magazine "Filing and Office Management" into two new ones. The other, of course, has the name "Filing." Each is to appear monthly, with subscription price of \$2.00 per year.

The Edison Round Table has issued an Anniversary Number for September 15: "*Forty Years of Central Station Development*." This will be of interest to after dinner speakers and the like, who wish to have some interesting and startling statements to arouse the attention of the audience. We are making a practice of cataloguing such articles, and can furnish an assortment of historic ammunition. Of course, this particular write-up has much to do with Thomas A. Edison—who is always an interesting subject.

Chemical and Metallurgical Engineering in its October 11, 1922 issue, makes the appeal that has been made through other technical journals, for *literature needed by Russian engineers*: "It is urged that persons having extra copies of scientific books, periodicals, publications of government and state scientific bureaus and scientific institutions, and authors' reprints of an original character or containing technical information, which have appeared since 1914, contribute them for this worthy cause." The article goes on to give details for shipment. By all means communicate with our Library for details if interested to comply with the request.

# Library of Stone & Webster, Inc.

## Recent Accessions

### (10) CIVIL ENGINEERING

- 435 Surface water supply of the United States, 1917 and 1918: Part xii—North Pacific Drainage Basins. B—Snake River Basin (1917). 168p, 6x9. WSI 463  
Part viii—Western Gulf of Mexico Basins (1918). 106p, 6x9. WSI 478
- 436 Surface water supply of the United States, 1918:  
Part xii—North Pacific Slope Drainage Basins. A—Pacific basins in Washington and upper Columbia River basin. 173p, 6x9. WSI 482  
Part xii—North Pacific Slope Drainage Basins. C—Lower Columbia River basins and Pacific Slope Drainage Basins in Oregon. 148p, 6x9. WSI 484
- 437 Sixteenth annual report of the Board of Water Supply of the city of New York, 1921, accompanied by report of the Chief of Engineers. Jan. 1, 1922. New York, 1922. 113p, 6x9. \*1791.W29.1921
- 438 Tenth report of the Quebec Streams Commission, 1921. Quebec, 1921. 112p, 7x10. \*7260.St83.1921

### (20) ELECTRICAL, (30) MECHANICAL ENGINEERING

- 439 The first central station in America, 1882-1922. Forty years of central station development—a brief review of the industry from Pearl Street Station (1882) to Calumet Station (1922). The Edison Round Table (anniversary number). Sept. 15, 1922. 8p, 8x11. V\*071.Ed4h
- 440 Proceedings of the Institution of Mechanical Engineers—Jan.-May, 1922. Vol. 1. London, 1922. 695p, 5½x8½, illus. \*6952.1922a.Vol.1

### (76) LEGAL

- 441 Laws of the State of New Hampshire passed during the Jan. session, 1921—Legislature convened Jan. 5, adjourned April 14. Concord, 1921. 453p, 7x10. \*1200.03.1921
- 442 Acts and resolves passed by the General Assembly of the state of Vermont at the twenty-sixth biennial session, 1921. . . . Montpelier, 1921. 438p, 6x9. \*1300.031.1921
- 443 Acts passed by the Legislature of the state of Louisiana at the regular session begun and held in the city of Baton Rouge on the eighth day of May, 1922. . . . Baton Rouge, 1922. 349p, 6x9½. \*3900.031.1922
- 444 Acts and resolutions of the third special session of the ninth legislature of Porto Rico, 1920. . . . San Juan, 1920. 184p, 6x9. \*6610.031.1920
- 445 Public Utilities Reports: containing decisions of the Public Service Commissions and of State and Federal Courts, 1922C. Public Utilities Reports, Inc. Rochester [c1922]. 974p, 6x9. \*035.L449.1922 C

### (90) SOURCES OF INFORMATION

- 446 The Bankers Encyclopedia (purple book). 56th ed., 28th year. Sept., 1922. Published semi-annually. Bankers Encyclopedia Co., Publishers. New York [c1920]. 1922p, 7x10. \*025.St9.9/22
- 447 The mineral industry: its statistics, technology and trade during 1921. Edited by G. A. Roush. . . . Vol. 3. New York [c1922]. 895p, 6½x9½. \*075.M66.1921

- 448 Chemical Engineering Catalog—1922 (seventh annual) edition. Published by the Chemical Catalog Co., Inc. New York [c1922]. 1187p, 9x12, illus. \*093.C42.1922
- 449 The Franklin Institute of the State of Pennsylvania—1922 year book. Phila., 1922. 170p, 6x9. \*1800.F85.093.1922
- 450 Year book of United States Department of Agriculture, 1921. Wash., 1922. 885p, 6x9. \*6880.02.1921
- 451 Blue Book of Chicago commerce, 1922. Published by the Chicago Association of Commerce. Chicago [c1922]. 656p, 6x9. \*2731.As78.093.1922
- 452 Foreign Commerce Handbook, 1922-23. Foreign Commerce Department, Chamber of Commerce of the United States. Wash. [c1922]. 31p, 6x9. \*6800.C35.09.1922-23
- 453 The Associated Harvard Clubs. Twenty-fourth annual meeting, Boston and Cambridge—June 15, 16 and 17, 1922. The proceedings, and also the reports of officers and committees. Supplement to the Harvard Alumni Bulletin. Sept. 28, 1922. \*1445.H26ah.1922
- 454 McGraw-Hill handbooks (publishers' list). McGraw-Hill Book Co., Inc. New York, nd. 18p, 3x6. \*096.M178h
- 455 Catalogue of Bureau publications: a review of information available to manufacturers and exporters in bulletins issued by the Bureau of Foreign and Domestic Commerce, May 1, 1922. Wash., 1922. 55p, 6x9. \*6890.C73.096c
- 456 Harvard Business Review—Vol. 1, No. 1. Oct., 1922. Published quarterly for the Graduate School of Business Administration, Harvard University. A. W. Shaw Co., Chicago. 128p, 7½x10. H B R 10/22
- 457 Bulletin of the Public Affairs Information Service: a co-operative clearing house of public affairs information. Eighth annual cumulation. Edited by H. N. Birchold. New York, 1922. 365p, 7x10. a\*096.W693pa.1922
- 458 Subject and author index of the Monthly Weather Review, 1921. Vol. 49. United States Department of Agriculture, Weather Bureau. Wash., 1922. 20p, 9½x12. \*6881.096.1921
- 459 The Agricultural Index. 2d three-year cumulation (6th annual volume) 1919-1921. . . . The H. W. Wilson Co. New York [c1922]. 1226p, 7x10 \*096.Ag83.1919-21
- 460 Price list 16—17th ed. Farmers' bulletins: department bulletins, circulars, agriculture year books. May, 1922. 54p, 6x9. \*6806.Pl16.5/22  
 Price list 38—15th ed. Animal industry: farm animals, poultry and dairying. 22p, 6x9. \*6806.Pl38.15th ed  
 Price list 40—14th ed. Agricultural chemistry. June, 1922. 6p, 6x9. \*6806.Pl40.6/22  
 Price list 43—15th ed. Forestry: tree planting, wood tests, and lumber industries. May, 1922. 16p, 6x9. \*6806.Pl43.5/22  
 List of publications relating to above subjects for sale by Superintendent of Documents, Wash., D. C.
- 461 Digest of geodetic publications issued by the United States Coast and Geodetic Survey resulting from surveys in the state of Massachusetts. Triangulation and variation of compass. Serial No. 209. Department of Commerce, United States Coast and Geodetic Survey. Wash., 1922. 10p, 6x9. \*6897.Se209

- 462 Franklin Union evening classes, 1922-23. "For the men who work." Boston, 1922. 23p, 4x9, illus. \*1461.F854ev.1922-23
- 463 Bibliography of 2700 business books, comprising new-in print—used-out of print adapted for special libraries, individual reading courses, investment firms, executives, banks. Dixie Business Book Shop. New York [c1922]. 113p, 5½x7½. \*096.D6429
- 464 Map of Africa and adjoining portions of Europe and Asia. Prepared especially for the National Geographic Magazine. Gilbert Grosvenor, Ed. Wash. [c1922]29x31. V7500.061
- 465 Our neighbors at Kendall Square. . . . a three-way traffic plan for the relief of traffic congestion in Boston and Cambridge. Published by the Murray Printing Co. Cambridge, nd. 16p, 6x9, illus, map. \*1445.07122
- 466 Extension Service program (corrected to Oct. 11, 1922): names of sponsors for various subjects. G. W. Lee, chairman. 1 typewritten sheet, 8½x14. \*087.L511ex. 10/11/22

## MISCELLANEOUS

- 467 Library has a copy of papers issued daily during convention of Stone & Webster Managers, Oct. 8-11, 1922
- 468 A statement of progress from the Post-War Committee on Architectural Practice to the members of the architectural profession in the United States, 1919. The American Institute of Architects. 8½6p, 8x11. V\*077. Am3528
- 469 Annual report of the Department of Public Utilities for the year ended Nov. 30, 1921. Pts. i-ii. Boston, 1922. Pt. i=273p; Pt. ii=515p, 6x9. \*1404.1921.Pts.i-ii
- 470 The chemical question: an open letter to W. G. Harding, President of the United States. F. P. Garvan, President of the Chemical Foundation. July 14, 1922. New York, nd. 16p, 5x8. V\*074.G199

## Coupons and Dividends Due

	Per Cent
Nov. 1, Cape Breton Electric Company, Limited, Preferred Stock.....	3
Nov. 1, Eastern Texas Electric Company, 5s, 1942.....	2½
Nov. 1, Eastern Texas Electric Company (Coupon Notes), 7s, 1925.....	3½
Nov. 1, *Edison Electric Illuminating Company of Brockton, Capital Stock.....	2½
Nov. 1, *Fall River Gas Works Company, Capital Stock.....	3
Nov. 1, Galveston Electric Company, 5s, 1940.....	2½
Nov. 1, Houghton County Electric Light Company, Preferred Stock....	3
Nov. 1, Jacksonville Electric Company, 5s, 1927.....	2½
Nov. 1, *Lowell Electric Light Corporation, The, Capital Stock.....	2½
Nov. 1, Mississippi River Power Company (Debentures), 7s, 1935.....	3½
Nov. 1, Paducah Electric Company (Debentures), 6s, 1939.....	3
Nov. 1, Pawtucket Gas Company of New Jersey, The, 4s, 1932.....	2
Nov. 1, *Public Service Investment Company, Preferred Stock.....	1½
Nov. 1, *Public Service Investment Company, Common Stock.....	1½
Nov. 1, Puget Sound Power and Light Company, 7½s, 1941.....	3½
Nov. 1, Railway and Light Securities Company, 5s, First series, 1935; Second and Third series, 1939; Fourth series, 1942; Fifth series, 1944; Sixth series, 1946.....	2½
Nov. 1, *Sierra Pacific Electric Company, Preferred Stock.....	1½
Nov. 1, Whatcom County Railway & Light Company, 5s, 1935.....	2½
Nov. 15, *Keokuk Electric Company, Preferred Stock.....	1½
Nov. 15, *Tampa Electric Company, Capital Stock.....	2½
Dec. 1, Baton Rouge Electric Company, Preferred Stock.....	3
Dec. 1, Baton Rouge Electric Company, Common Stock.....	5
Dec. 1, Berkshire Power Company, The, 5s, 1934.....	2½
Dec. 1, Blackstone Valley Gas and Electric Company, Preferred Stock... 3	
Dec. 1, *Blackstone Valley Gas and Electric Company, Common Stock... 2½	
Dec. 1, Central Mississippi Valley Electric Properties, Preferred Stock... 1½	
Dec. 1, Columbus Electric and Power Company, 6s, Series A, 1947..... 3	
Dec. 1, Connecticut Power Company, The, 7s, Coupon Notes, 1926..... 3½	
Dec. 1, *Connecticut Power Company, The, Preferred Stock..... 1½	
Dec. 1, *Connecticut Power Company, The, Common Stock..... 2	
Dec. 1, Edison Electric Illuminating Company of Brockton, 5s, 1930.... 2½	
Dec. 1, *Key West Electric Company, The, Preferred Stock..... 1½	
Dec. 1, Northern Texas Electric Company, Common Stock..... 2	
Dec. 1, Pawtucket Gas Company of New Jersey, The, Preferred Stock... 2½	
Dec. 1, Puget Sound Power Company, 5s, 1933..... 2½	
Dec. 1, Tampa Electric Company, 5s, 1933..... 2½	
Dec. 15, *El Paso Electric Company, Common Stock..... 2½	

\*Payable quarterly

Dividend rates are based on the last declaration.



# Quotations on Securities of Companies under Stone & Webster Management October 31, 1922.

The Securities Department executes orders on commission for those wishing to purchase or sell.  
Requests for information in regard to the companies will be answered promptly.

COMPANY	BONDS		PREF. STOCK		COMMON STOCK	
	Int. Rate	Price and Int.	Div. Rate	Price	Div. Rate	Price
Ab. & Rock., The El. Lt. & Pr. Co. of { Notes, July, 1923	7%	100½	No	Pref	8%	135
Baton Rouge Elec. Co. { Bonds, 1939 Notes, Jan., 1923	5% 7%	92 115	6%	86		
Blackstone Valley Gas & Elec. Co. (Common Stock par value \$50)	5%	99	*6%	98	10%	75
Cape Breton Elec. Co., Ltd.	5%	83	6%	†65		12
Central Mississippi Valley Electric Properties	No	Bonds		78		11½
Chicago, Wilmington & Franklin Coal Co. (Common Stock par value \$10)			*6%	†90	10%	†25
Columbus Elec. & Power Co.	6%	104	*7% 1st *7% 2d	103½ 92		95
Columbus Power Co., The	5%	98		.....		.....
Connecticut Power Co., The	5%	96	*6%	96		
Connecticut Valley Lumber Co. { Serial Bonds June, '23—'34	6%	100 98				
Eastern Texas Elec. Co. { Bonds, 1942 Notes, May, 1925	5% 7%	94 102	*6%	85	8%	95
Edison Elec. Illg. Co. of Brockton { Bonds, 1930	5%	100	No	Pref	10%	†185
El Paso Elec. Co. { Bonds, 1932 Notes, 1925	5% 7%	95 102	6%	88	10%	127
Fall River Gas Works Co.	No	Bonds	No	Pref	12%	†213
Galveston Elec. Co.	5%	88		.....		.....
Galveston-Houston Elec. Co. { Notes, Aug., 1925 Notes, Feb., 1926	7% 8%	102 100	*6%	72 B L		30½ B L
Galveston-Houston Elec. Ry. Co.	5%	89	No	Pref		.....
Haverhill Gas Light Co. (Stock par value \$50)	No	Bonds	No	Pref	9%	86
Houghton County Elec. Lt. Co. { Bonds, 1927 Notes, 1923 (Stock par value \$25)	5% 7%	92 100	6%	†20		12

COMPANY	BONDS		PREF. STOCK		COMMON STOCK	
	Int. Rate	Price and Int.	Div. Rate	Price	Div. Rate	Price
Houston Elec. Co.	5%	99½ <sup>B</sup>		.....		.....
Jacksonville Elec. Co.	5%	91½				
Jacksonville Tract. Co.	5%	86		37		8
Keokuk Electric Co. { Notes, January, 1923	6%	100	*6%	80		.....
Key West Elec. Co., The	5%	84		.....		.....
Lowell Elec. Lt. Corp., The	No	Bonds	No	Pref	10%	†185
Mississippi River Power Co. { Bonds, 1951 Debtentures, 1935	5% 7½%	93 <sup>B</sup> 103	*6%	85½ <sup>A</sup> <sup>B</sup>		30 <sup>A</sup> <sup>B</sup>
Northern Texas Elec. Co.	5%	90	6%	84 <sup>B</sup> <sup>L</sup>	8%	87 <sup>B</sup> <sup>L</sup>
Northern Texas Traction Co.	5%	95	No	Pref		.....
Pacific Coast Power Co.	5%	94	No	Pref	No	Com
Pensacola Elec. Co.	5%	86		28		6
Public Service Investment Co.	No	Bonds	*6%	†85		†103
Puget Sound Elec. Ry.	5%	91 <sup>B</sup>		.....		.....
Puget Sound Power Co.	5%	96	No	Pref	No	Com
Puget Sound Power & Light Co. { Notes, 1925 Bonds, 1941	8% 7½%	100 105	Prior *7% *6%	105 85	4%	54
Railway & Light Sec. Co. { First Series, 1935 Second Series, 1939 Third Series, 1939 Fourth Series, 1942 Fifth Series, 1944 Sixth Series, 1946	5% 5% 5% 5% 5% 5%	96½ 96 96 95½ 95½ 95	*6%	88	6%	80
Savannah Elec. Co.	5%	86 <sup>B</sup> <sup>L</sup>				
Savannah Elec. & Power Co.	7½%	107	*8% *6%	102 70		17
Seattle Elec. Co., The { 1st Mortgage, 1930 Cons. & Ref., 1929 Seattle-Everett, 1939	5% 5% 5%	99½ <sup>B</sup> 96 93	No	Pref	No	Com
Sierra Pacific Elec. Co.			*6%	†77		7
Tacoma Ry. and Pr. Co.	5%	90	No	Pref		.....
Tampa Elec. Co.	5%	95	No	Pref	10%	138
Whatcom County Ry. & Lt. Co.	5%	94	No	Pref	No	Com

Quotations are approximate. All stocks \$100 par value unless otherwise specified.

\*Cumulative. †Ex-Dividend. A. Listed on London Stock Exchange. B. Listed on Boston Stock Exchange. L. Listed on Louisville, Ky. Stock Exchange. N. Common shares have no par value. X. Ex-rights.

The Securities Department wishes to bring to the attention of members of the organization the following securities which it recommends for investment :—

<i>Bonds</i>	Rate	Interest and Dividend Dates	Price and Yielding Interest About	
*MISS. RIVER POWER CO. First Mortgage, due 1951	5	Jan. and July	Market (91½)	5.45 %
†EASTERN TEXAS ELEC. CO. Gold Mortgage, due 1942	5	May and Nov	94	5.50 %
PENN. POWER & LIGHT CO. First and Ref., due 1952	5	Apr. and Oct.	92¾	5.50 %
SEATTLE ELEC. CO. Cons. and Ref. due 1929	5	Feb. and Aug.	96	5.60 %
COLUMBUS ELEC. & POWER CO. First and Ref., Mortgage due 1947	6	June and Dec.	104	5.70 %
*UNITED LIGHT & RYS. CO. First Lien and Cons. due 1952	6	Apr. and Oct.	99	6.05 %
WISCONSIN PUBLIC SERVICE CORP. First and Ref. due Oct. 1, 1952	6	April and Oct.	99¾	6.05 %
*PUGET SOUND POWER & LIGHT CO. Gen'l and Ref., due 1941	7½	May and Nov.	105	7.00 %
<i>Notes</i>				
*SWIFT & CO. Gold Notes, due Oct. 15, 1932	5	Apr. 15 and Oct. 15	Market	5.80 %
*EL PASO ELECTRIC CO. Gold Notes, due July, 1925	7	Jan. and July	102	6.10 %
<i>Investment Stocks</i>				
‡BLACKSTONE VALLEY GAS & ELEC. CO. Common	10	Mar. 1 qrtly.	75	6.90 %
MISS. RIVER POWER CO. Cumulative Preferred	6	Jan. 1 qrtly.	Market (85¾)	7.00 %
NORTHERN TEXAS ELEC. CO. Preferred	6	Mar. 1 and Sept. 1	84	7.15 %
PUGET SOUND POWER & LIGHT CO. Cumulative Preferred	6	Jan. 1 qrtly.	85	7.15 %
TAMPA ELEC. CO. Capital	10	Feb. 15 qrtly.	138	7.25 %
SIERRA PACIFIC ELEC. CO. Cumulative Preferred	6	Feb. 1 qrtly.	77	7.80 %
SAVANNAH ELEC. & POWER CO. Debenture	8	Jan. 1 qrtly.	102	7.85 %
EL PASO ELEC. CO. Common	10	Mar. 1 qrtly.	127	7.85 %
GALVESTON-HOUSTON ELEC. CO. Cumulative Preferred	5	Mar. and Apr.	72	8.35 %
*Denominations \$100, \$500, \$1000				
†Denominations \$500, \$1000				
‡Par \$50				

Detailed information will be furnished upon request

## Securities Department Offices

147 Milk Street

Boston

New York

120 Broadway

Chicago

1st Nat'l Bank Bldg.

# STONE & WEBSTER *Journal*

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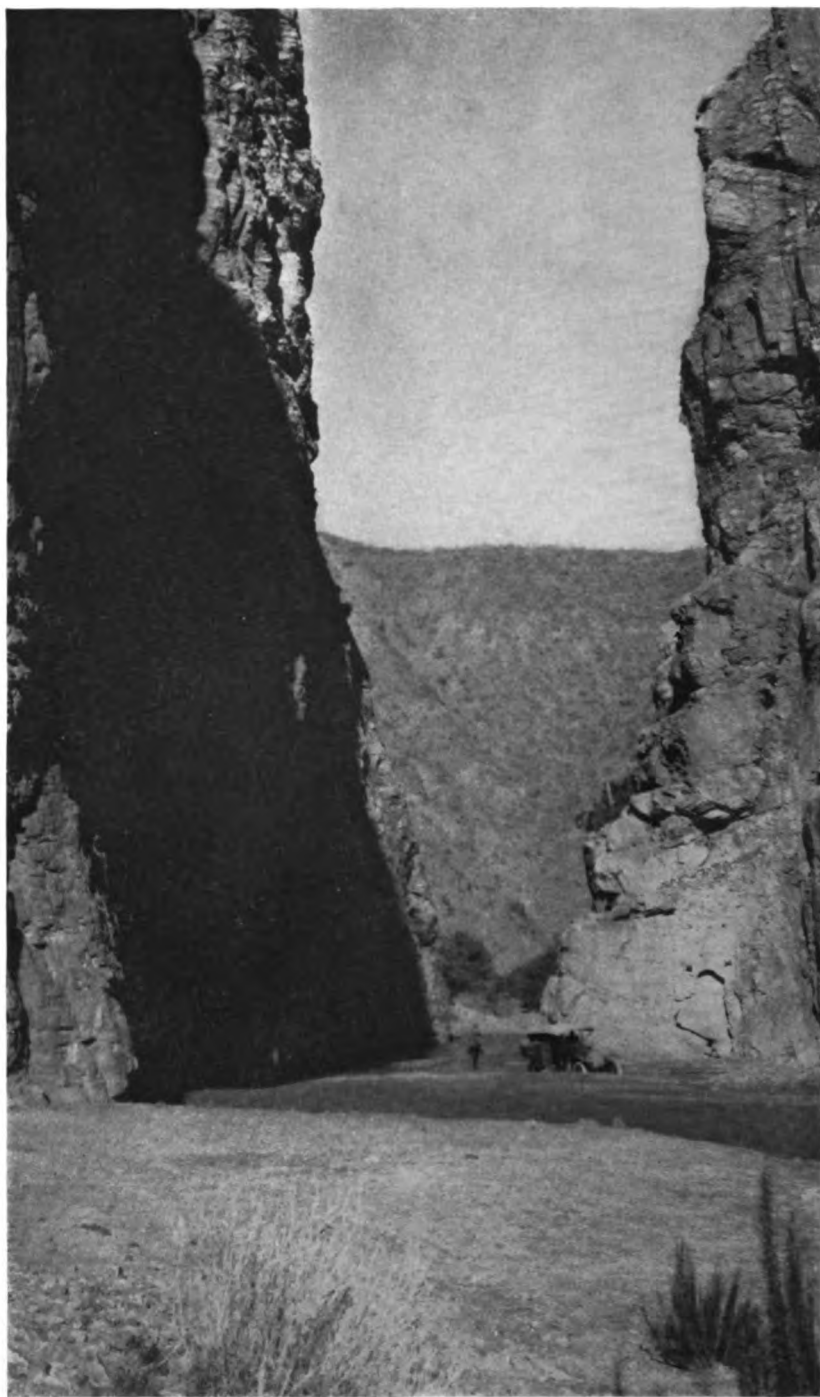
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**BOSTON**





**DIFFICULT RAILROAD LOCATION ON ATOCHA-VILLAZON RAILWAY IN BOLIVIA**

# STONE & WEBSTER

## JOURNAL

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### EDITORIAL COMMENT

#### Bees and Ants — and Men

EVERYONE, we think, will read with pleasure, Mr. Royce's article in this issue on "Hopeful Aspects of Europe." So many persons are talking as if the world were hastening headlong to destruction that it is agreeable to be reminded that there are counteracting tendencies.

If economic, or common sense, principles are allowed anything like free play, world conditions are bound steadily to improve. The very fact of dearth implies increased activity and larger production and exchange. If the human race were like bees and ants it would soon begin to forget its troubles. But unfortunately mankind is plagued by a thing called by some psychology, by others nerves. Bees and ants are automata; at any rate, they do not seem to be troubled with nerves. That is, they act like fatalists—or perhaps we mean optimists. When a catastrophe overtakes their community, they apparently waste no time crying for spilt milk. Seemingly they take it all as part of the game and immediately get busy repairing the loss.

When mankind suffers such an experience it has an attack of nerves. This operates in many ways. For one thing, a considerable part of it begins to loot. From various quarters throng persons intent on making the confusion worse confounded in order that they may make illicit gain. A great many others, more honestly inclined, are for a time benumbed; when they begin to overcome the inertia



occasioned by despair, they employ their time in senseless talk and fritter it away in impossible and fruitless schemes.

Great emergencies call for great minds. If such minds are not now at work on world rehabilitation, the world will in all probability soon begin to breed them. Situations eventually produce men. Sometimes the men do not appear until every foolish-panacea has been tried.

But after all, most of us (usually without knowing it) are a good deal like ants and bees. We get excited and fearful, but we keep on working. The instinct to work, to provide oneself with necessities, is common to all animals, two-footed as well as four-footed. Man is a good deal more of an automaton than he likes to think. He prides himself on his godlike qualities of thought and speech, but at the same time he bears a strong resemblance to the quadrupeds in that he does not like an empty stomach.

It is this last fact that is making for the rehabilitation of the world. Even in such crazy-headed countries as Russia, the average person would like to buckle down to hard work without let or hindrance from crack-brained theorists or audacious looters. It is the necessity for everybody to get down to "brass tacks" that will sooner or later drive these theorists and looters back to the holes from which they rushed impetuously when the recent disaster overtook the world.

There will be more work in the future than there has ever been in the past, for the simple reason that there is and will continue to be more necessity for work. The long periods that have locally followed certain great calamities in the past were occasioned by the difficulty of obtaining the facilities for a new prosperity. When the Black Death took away a third or a half of the population of Europe that was necessarily the case. Lack of labor, transportation, communication of information, banking resources, etc., made recovery slow.

But the world's supply of all these facilities is today adequate to a steady and even speedy recovery from disaster. Thank heaven, the national resources of the earth are still boundless, and there is, despite the ravages of the last eight years, enough labor and capital to make the wheels of industry hum. When the world allays its hysteria, when theorists give over crying for the moon, when revolution is

no longer a good commercial proposition, the world will begin to live once more instead of merely existing.

The encouraging thing is that most persons have at least a sneaking idea that, as someone has said, work is the best fun. Given the materials to work with, most of us had rather work than loaf. That being the case, the world is bound to get firmly on its feet again, theorists and revolutionists to the contrary notwithstanding.

## The Living Wage

**W**HAT is this living wage about which one hears so much? Has there not always been a living wage? There must have been, otherwise people would not be living. It seems to us that in debating this question one should first define the terms to be employed. A great scholar said a good many years ago that the whole question of philosophy had resolved itself into a question of terminology. But that can be said of every other question, including the one in hand.

Here are two words, "living" and "wage." What do they mean? Living comes from life, which obviously is the opposite of death. If you are living you are on the earth; if you are not living you are under the earth. Wage, in its original sense, means a guarantee, an engagement, a promise. The word "wed" has the same origin; so that young persons who enter the bonds of matrimony may conclude that they are on wage. This seemingly frivolous remark is made with a serious purpose.

In these days no one lives to himself alone. One can die alone, but one cannot live alone—that is, entirely free from the influence of others, unless, of course, he lives as the first man lived, which none of us care to do. In living as we do today, everybody is on wages. In short, everybody is under engagement with other people. The owner of a factory engages to provide facilities for his workmen to produce goods with, and to support the workmen while producing the goods. That is the wage he pays. The workmen engage to use the facilities thus provided and out of the product of their labor to pay back what has been advanced to them for their support. In this way they pay wages to the owner of the plant.

It will thus be seen why we compared wages to matri-

mony. It takes two persons of different types to make a wedding, and it also takes two different types to make an industrial proposition. Each of the contracting parties pays the other wages. Employers, like employees, have to live, and they have to live by what they get from employees. Employees have to live and their livelihood has to come from employers. It is as broad as it is long. The only difference is in the size of the wage and the way it is paid. Later on we shall return to this point.

This whole discussion is confused, because people use a word one way at this moment and another way the next. Now they talk about living in the sense of having a foothold on the planet, then they talk about it in connection with a sirloin roast and a Ford car. In the sociological discussion of these days "living wage" is used exclusively in the latter sense.

If we accept the second definition, it is necessary to ask a puzzling question. In old days a living wage was held to be the amount necessary to keep a worker alive and in condition to do his work effectively; some claimed that it should not only do this but also enable the worker to support a wife and two children. In short, "living wage" signified an irreducible minimum. The world had to have labor, and it had to provide laborers with enough to keep them alive and in sufficient bodily vigor to do the work required of them, and in addition with enough to get married and raise families for the purpose of providing the future with laborers.

But all that has been changed. The irreducible minimum is no longer the foundation of the living wage. Or if it is, the foundation is so hidden from sight that it is no longer considered a factor in the problem. The old conception of the living wage was based on sheer necessity. The present conception is based on natural desire. The puzzling question to which we alluded a moment ago is—To what extent does natural desire properly fall within the category of living wage? Where should we stop in figuring living wage? How much of the comforts and luxuries of life should living wage include?

That is indeed a pertinent question. Every able-bodied worker today earns a good deal more than enough to provide him with the things necessary to keep him in condition to work with efficiency. If a great many of the things which he

now enjoys were taken from him, he could labor with undiminished energy and turn out as large product as at present. In many cases he could turn out larger, because unfortunately it often happens that an increasing consumption of luxuries results in decreasing physical and mental effort. Some of the best and most effective work ever accomplished by mankind has been done by persons whose mode of life would be scorned by the worst-paid workman of today. It is amazing how much has been achieved in the past by persons whose diet did not much exceed Scotch oatmeal. For many of us Scotch oatmeal is now merely an appetizer at the breakfast table.

Not many years ago silk stockings were a great luxury. Only a few women wore them, though probably every woman coveted them. Today almost every woman wears silk stockings—a few who wish to be really distinctive have gone back to cotton. The same thing may be said of fur coats. Not long ago we counted twenty-five in walking about one hundred feet along a street, at a not crowded hour. Fur coats no longer afford any idea of so-called social distinctions. This is also true of automobiles. Not many years ago one could walk along the country roads with safety and comfort, but today this is almost impossible, owing to the multiplicity of cars. As for cities, it looks as if the time were not far distant when cars would have to be excluded from the streets in order that the people could get about and transact their ordinary and necessary affairs. The price of beef and lamb and pork is at figures which would have astounded everyone a generation ago, but the increase in price is not more astonishing than the increase in consumption.

Now how much in the way of silk stockings and fur coats and automobiles and beef and lamb and pork constitutes the living wage? Does the answer to this question rest upon economic facts, or does it rest upon natural desire? Current discussion would imply the latter. Organized labor is frankly asserting as much, and it is strongly backed by the pulpit and the press. No one could want to see the world return to the old standard of living. The gratification of natural desire is a perfectly legitimate thing provided it is not overdone. There is a limit, but where is it? One could hardly conceive of a more difficult question. To answer it aright one would have to go to the very bottom of the science of economics.

For want of a better answer we should say this. The world cannot consume more than it produces. In the second place it should not consume all that it produces at any one time, for something must be left over as the basis of future production. In the matter of production the world is always a little ahead of consumption. If for any length of time it produces less than it consumes, it eats into the principal of its wealth, and eventually it will reduce itself to poverty. That is possibly the greatest danger that confronts the world today. However much we may theorize and talk about the necessity of a living wage, you cannot live unless you have the things to live on. You cannot pay a wage that you have not the means of paying. If we could inventory all the articles of consumption at present in existence throughout the world, we might know a little better where we stand in the matter of a living wage. But that is obviously impossible. We have to chance it.

Up to a comparatively recent period people had been consuming at about the same rate for hundreds of years, and that means that articles of consumption had been produced at fairly the same rate for hundreds of years. Even after the great increase in production took place as a result of the appearance of power machinery, the increase in consumption was automatically and gradually adjusted to the increase in production. But in the last generation, and particularly in the last few years, consumption has been speeded up in a very marked degree, and it is a question in a great many minds if it is now profitably adjusted to production.

The so-called living wage of a large part of the people has increased very fast. And in saying this we do not mean merely that the money price of wages has advanced rapidly. We mean also that the comforts and luxuries which this class of people enjoy are much larger in amount than formerly. But on the other hand there is another large part of the people who have not gained this advantage, or at any rate have not gained it to anything like the same extent. In fact, many persons of this class have and enjoy less than they previously had, even if their incomes in terms of money are larger than they were. A salary or an income is just as much a wage as the return to the man who does manual labor in a mill or on a farm. If what we have just said is true, it follows that the living wage of some persons has increased

at the expense of the living wage of other persons. Some are better off because others are worse off, or at least no better off.

Those who gained the advantage say that they were entitled to it, that the others had already received all they should fairly have and should relatively have no more. This, therefore, brings us to the question of the fair apportionment of the product of labor throughout the world, or more specifically throughout this country.

How should the product of labor be apportioned? In discussing this question let us exclude everything except the wages of the so-called laboring class—that is, the class specifically designated “wage earners.” Karl Marx said, and his followers have vehemently echoed him, that the workman is entitled to the full product of his labor. Suppose we accept that as a working hypothesis.

What is the product of a workman’s labor? Why, the goods that he makes. But no workman would expect or desire to make goods in a factory and take them away and consume them himself. Theoretically the whole product of his labor may constitute his wage. But he cannot consume it and does not want to; so that while Marx’s theory may be all right, the task of making his theory actually effective is exceedingly perplexing. Then too, when you talk about the full product of a workman’s labor you have to bear in mind that he has a gross profit and a net profit. The net profit is all that actually belongs to him, which is easily demonstrated.

Suppose a workman should decide that he would work no longer in a mill but would have an establishment of his own, and would all alone spin yarn and have all the product without let or hindrance. He would speedily find that he could not do it. In the first place he might have to hire an additional bit of room in which to erect and operate his spinning frame. In that case he would have to pay rent. Next he would have to buy his raw material and that would take money. From time to time he would have to have repairs made on his machinery, and that would also take money. Cutting out all the steps in the manufacturing process, let us conclude that the yarn is actually made and ready for disposal. Now he has no use for the yarn himself. It would be a white elephant on his hands. If the product of his labor is of no use to him, he has got to exchange it for

things he *does* want. Of course he exchanges it for money, but to do that he has got to have some sort of selling apparatus. He may find some one who will sell it for him, but in that case he must pay a commission. Or he may make it up into bundles and carry the bundles around in a horse-drawn or motor vehicle. But that costs money. Or he may put a bundle on his back and go out and see this person and that person in an effort to sell the yarn, and that takes money, too; it does not take money immediately out of his pocket, but it takes a very large amount of his time, and time is money.

These are only part of the expenses to which he will inevitably be put in disposing of his product. When he has paid all these bills he may perhaps have left a net profit. Though he may talk about being entitled to the full product of his labor he knows perfectly well that he is not going to get his rent and his machinery and his repairs and his materials and all his selling costs for nothing. If he owned a shanty he would not let another person use it for nothing, nor would he sell machinery, or make repairs, or sell raw material, or sell another person's goods without adequate compensation. The other fellow would expect a living wage from him.

Now what does he do if he is sensible and concludes that after all he will stay with the factory? Why, exactly the same thing, but in other ways. The factory allows him a bit of space to work in and pays rent for it. It provides him with the machine, which it buys and pays money for. It also provides him with raw material without his being at the time out of pocket. It also sells his product for him at not a light expense to itself. What is left after all these expenses are paid belongs to him. Now what does he get as a result of these various transactions? Why, just what he would have got if he had his own establishment—net profit. The net profit comes to him in the form of wages. The only sensible way to settle the question of the living wage is the way that has always been employed, namely, to give the workman the net profit of his labor and no more.

Why should he have more? If he asks for more he asks for charity.

But the workman may say, "That is all right in theory, but it does not work out honestly in fact. What you say

about rent and machinery and repairs and raw material and disposing of the product sounds well, but what I claim is that the factory is charging me too much for all these services." Perhaps an effective answer to that is—"Could you do any or all of these things at less yourself? If you could not you are no worse off, and probably quite a bit better off, than you would be if you had the full product of your labor as a result of being your own employer."

Facts are stubborn things. Putting it the way we have, the workman is unquestionably better off working in the factory than he is working in his own shanty. It is safe to say that if he were not, he would not after 150 years of experiment be working in the factory.

Once more, what he implies about the factory cheating him in what it charges for rent, machinery, repairs, raw material and selling cannot really be true. He forgets one thing. He is competing with other workmen for a chance to work in the factory and to use the facilities there provided. But it is equally true that the factory is competing with other factories for the chance to get him to work for it and in it. He competes with other workmen in the matter of what shall be paid to the factory for the services it affords workmen, and the factory competes with other factories in the matter of what shall be paid to workmen for working in it. Each party is up against sharp competition, and the terms which each party makes with the other party are based upon competitive conditions.

This brings us to the last word, which is this. Co-operation among workmen for the purpose of gaining the best terms possible from manufacturers is today more effective than co-operation among manufacturers for the purpose of gaining the best terms possible from workmen. Workmen are using this advantage for all it is worth. The owners of factories will keep their plants in operation in the face of everything except long continued loss. Their resources are larger than those of workmen, and they can keep up a losing struggle longer. The high wage scale prevailing today in general industry is due to this fact. The only question is, How much longer can this aggressiveness on the part of labor continue without effecting such losses on manufacturers and other employers as will make them say—"You will have to mark down your living wage or we shall have to stop our machinery."



If this should actually come to pass and machinery should be stopped for the simple reason that it could no longer be operated at a profit, the living wage would assume a much different character. As a matter of fact, everyone could live on far less than he is at present consuming, and we may all have to if things go on much longer as they are going at present.

## Value

**M**ANY persons are confused when the word "Value" is mentioned. This is perhaps natural when one considers the different ways in which the word is used. It has, however, but one meaning in political economy; that is, in business—for political economy is nothing but the science of business. Words are very important things. We may say that a rose by any other name would smell as sweet, but, Shakespeare to the contrary notwithstanding, that is not always the case. We have always supposed that words spring from things, but it is too often the case that things spring from words. A wrong definition frequently leads to a wrong course of action. Some one once said that the world is governed by words, but considering the way the world is governed that does not speak very well for words.

When we talk about value we may mean different things. A thing is useful, and for that reason we say it has value. As a matter of fact, it may have no value at all in the economic sense. Nothing is more useful than the air we breathe—we could not live without it. But for most of us it has no value. If a coal mine should collapse on us, sealing us up from the outside world, it might have great value. If we had been lost for days in the Desert of Sahara, water would have great value; but as a rule water has no value at all except as we have to pay for piping it and pumping it into our houses. If we were hunters camped beside a running brook, it would have no value. Usefulness does not necessarily mean value.

Value in the sense in which it is used in business arises when we desire to exchange things. A boy may have a jack knife and another boy may have a box of dominoes. Each of them covets the other's possession more than his own. Each of them desires to swap with the other. If they exchange the jack knife and the dominoes, the jack knife has the value of a box of dominoes and the dominoes have the value of a jack knife. Value is measured by the desire that one person, who

has something to exchange, has for something that another person has. There are sometimes extreme cases of this.

The Patriarch Isaac, who was a man of wealth, had two sons, Esau and Jacob. Esau was his favorite and on him he conferred the birthright. In other words, the patrimony was Esau's. Now Jacob one day had made a mess of pottage, the money cost or the labor cost (or call it what you will) of which could not have been very great. That same day Esau came back from the field in a famished condition. When he saw the pottage, he said, "Feed me I pray thee with that same red pottage, for I am faint." Jacob said, "Sell me this day thy birthright." Esau replied, "Behold, I am at the point to die and what profit shall this birthright be to me." And Jacob said, "Swear to me this day." And he swore unto him and sold his birthright unto Jacob. Then Jacob gave Esau bread and pottage of lentiles; and he did eat and drink and rose up and went his way. Thus Esau despised his birthright.

Most of us would give a mess of pottage for a birthright such as Esau's. The prodigal son was of the same stripe. His father divided his property among his two sons and the younger took his into a far country and spent it on riotous living, and in the end went out and tended swine in order to keep himself from starving. A good many young men today are following his example. Riotous living is what they want more than anything else. Most of us would not give a sixpence for riotous living, but if you are built that way you will give all you possess. Again, a man will give \$10,000 for a small piece of canvas with some paint on it, because he wants the canvas and paint more than he wants the \$10,000. The value of the canvas and paint is \$10,000; the value of the \$10,000 is the canvas and paint.

Why, even the human soul has its value. Many a man is said to have sold his soul. Hence that old question, What shall it profit a man if he gain the whole world and lose his soul? The soul is not usually regarded as an economic factor, but it certainly seems to possess exchange value.

For ordinary purposes, therefore, we may say that value is what a thing will sell for. Professor Perry used to say that a market for goods is goods at market. That is, you have things you want to exchange and you carry them to where there are people who have other things to exchange and who may want your things. Of course, a thrifty person who has spent two days' labor making something is not going to

exchange it for something that has cost another person only one day's labor. Other things being equal, each person tries to get in exchange a commodity or a service which involves about the same amount of labor as he put into what he is trying to sell. Obviously, it is not easy to strike the balance on first sight. But as people have been making things and rendering services for hundreds of years and exchanging them, anyone can now almost instinctively tell what a thing is worth. One's knowledge on this point may not be strictly accurate but it is near enough to keep things moving.

Allowance must of course be made for the fact that supply and demand, which almost automatically tend to equalize themselves, frequently get out of adjustment. Supply sometimes (always unintentionally and usually unexpectedly) runs far ahead of demand, and at other times demand will greatly outstrip supply. Such incalculable facts from time to time distort prices, making them abnormally and spectacularly at variance with labor cost. In these remarks, however, we are concerned with the normal operation of exchange.

What we have been saying is fundamental. But there are many surface facts which complicate the problem. Very often circumstances arise to increase the labor cost of this, that or the other commodity or service, with the result that the people who buy the commodity or service have to give more in exchange for it. But this does not change the fundamental character of the transaction.

It will be noted that above we speak of labor and that now we are speaking of labor cost. The terms are, however, identical; but to make that clear we shall have to go a little deeper into the problem. Labor is the occasion and measure of exchange value. Now, what is labor? It is of course the muscular and mental effort which one employs in doing something. Suppose you say that a bushel of wheat exchanges for \$1.00 this year and for \$2.00 next year. Is the labor effort any greater at \$2.00 than at \$1.00? Many persons would say by no means. Well that leads to a very pertinent discussion.

No one can do any labor without certain prerequisites. A dead man cannot do business. One must be alive and kicking. But in order to be alive and kicking one must have food to eat and clothes to wear and a house to live in. Those things constitute the irreducible minimum of the prerequisites of

labor. It follows, therefore, that when you talk about labor you necessarily talk about the cost of labor. Labor represents not merely the amount of time which one devotes to doing something, but also all that is necessary to keep him alive and in condition to use the time at his disposal. And it should be said that the efficiency of labor increases in proportion to the amount of brains which one puts into his labor in addition to the things that feed him and clothe him and house him.

The cultivation of one's brain itself costs money and time and strenuous effort, and it has to be paid for. As a rule a clever man can make more things, or at least better things, than a dull-witted man, and he rightly expects to get more in exchange for his product than the other. When you talk about the labor as the measure of value you have to take into account all that we have just said.

Suppose we assume that the average person lives twice as well as he did, say half a century ago. This may mean many things. It may mean for one thing that he has made up his mind that he won't work for the return which he got half a century ago, and that everyone has consented to give him more. But they could not have given him more unless there was more to give, and there could not have been more to give unless he had helped to make the more. It does not follow that he has helped to quite the extent that he supposes.

That there is more to give than there was half a century ago is due in very large measure to the machinery that has been invented to turn out goods faster and better. It is safe to say that the average man has had nothing to do with inventing and making the improved machinery. It has been made by people above the average, as a result of very exacting labor on their part. Anyhow, the machinery has been improved and the average man uses it under direction, and by so doing turns out his goods much faster than half a century ago. The great increase in the amount of consumable goods has enabled everyone to consume more, and by consuming more of the necessities we have all acquired a taste and a desire for things that are not necessities, and have managed to get a good many of them.

So we have all had to have more to exchange for other things, and this has had a marked effect on what we call prices. In recent years manual workers have insisted on having more than they had before, and the people who have

bought their labor have paid them more. That is why prices of all description have gone to such high figures.

As a rule a certain amount of labor (interpreted in the sense outlined above) exchanges for an equivalent amount of labor. This rule like all other rules admits of exception. If a man traveling in the Desert of Sahara has a supply of water, which he has obtained with practically no labor at the last oasis which he visited, comes across a man with \$1000 in his pocket and dying of thirst, he may be able to exchange a glass of water for the \$1000. In this case labor is not matched against labor. The \$1000 in the pocket of the dying man represents a good deal of labor, while the water in the possession of the other person represents very little labor. In a word, labor and price have parted company for the time being. A picture by Rembrandt today has an exchange value enormously in excess of the exchange value it would have had when painted. That is because there are only a few Rembrandts in existence, and everyone would now like to possess one. But such instances fall outside the realm of economic discussion. Where things are in continuous process of production and the supply is fairly easily regulated to meet the ordinary demand, the exchange value is reached by the rough higgling of the market, by balancing the labor costs of the things offered for exchange.

This is more clearly perceived in the case of commodities than in the case of services. It may not be hard to say how much labor is involved in making a loaf of bread, and consequently for how much of other things a loaf of bread should be exchanged. But when you come to the product of a central station it is far less easy. You are now selling a service. A baker sells bread to a certain community. He knows about how many people there are in the community, and how many other bakers there are, and about how many loaves the community ought to buy of him. It is comparatively easy, therefore, to tell about how much his daily output should be. Furthermore, he does business almost entirely on a cash basis. He does not have a number of people owing him large sums, which possibly they may not be able to pay. Once more, if the business does not turn out as well as he hoped, he is able to abandon it without much if any loss.

Take the case of the people who own the central station. They have to do some very close figuring before they begin business. They not only have to obtain a fairly good idea of

what the materials and labor for constructing and equipping the plant will cost, but they have also to inform themselves regarding the traffic density of the community to be served, the probable amount of their product that will be consumed by this and that class in the community, the percentage of loss to which they may be subjected from the non-payment of bills, the liability that the economic standing of the community may be changed for better or worse, and, not least of all, the liability of increasing legal exactions on the part of legislative bodies, public service commissions and courts.

Experts who are asked to figure on the value of a new public utility (or for that matter on the value of an old one) have to keep all these facts in mind. Even if a central station plant were to be built for immediate sale as a plant, they would have to be kept in mind—a prospective buyer could not afford to overlook them. But central station plants as a rule are not built with that purpose in mind. They are built to sell service, and their value is based on their continuing in business year after year and providing and selling service.

Turn for a moment to an industry of an entirely different character. Consider a shoe factory. This is not subject to public regulations like a central station plant. Land is bought, the factory is built and equipped, people are hired to work in the factory, shoes are made and sold and worn. Now, what is the value of that shoe factory? Well, in the first place there is the value of the land, which may have appreciated in value since the factory was built, or possibly decreased. There are the factory and the machinery in the factory, and these through use have depreciated in value, provided they have not been kept as good as new by constant expenditure. There is the stock of raw material and finished goods on hand at the moment we are trying to obtain the value of the plant. And last of all, there is the business that the factory has in the course of years built up. The prospective buyer wants more than the land and the building and the machinery and the stock of raw material and goods in hand. It is the business he is buying. In other words, he is buying the customers of the shoe factory. Now it has cost the shoe factory a great deal of time and labor and money to secure these customers. When it sells a pair of shoes the value is based on the labor cost of securing these customers. We say "labor cost," because the time and the money connote labor cost.

In economic law a central station is bound to pursue a

similar policy. It has to undergo the cost of land, construction, equipment, payroll, taxes, depreciation, bad debts, and interest on the capital employed, each of these being on final analysis a labor cost.

To digress for a moment, how can bad debts be a labor cost? In this way. The plant is designed to operate at efficiency. All the costs are gauged to that fact. And the rate which it charges for its service is necessarily based on that fact. The land, construction, equipment, payroll, taxes, depreciation, bad debts, and interest are all prorated over the rate to the consumer of the service. The central station has to collect a certain amount of money from its customers to offset the labor cost of providing and operating the plant at efficiency. And this certain amount of money has to be prorated over the whole of its customers. If there were no bad debts, the amount collected to be so prorated would be reduced. If there were bad debts the amount so collected might conceivably have to be increased. It is as true in private finance as in public finance that the consumer pays the tax.

It will be seen, therefore, that the whole cost of a service rendered by a central station is as much a labor cost as is the whole cost of a pair of shoes. This is the case when economic law has free play. The free play of economic law is, however, frequently interrupted, and this is particularly the case in connection with public service industries, owing to the fact that the persons in whose hands public regulation of such industries is vested have not as yet completely mastered the very complicated and complicating details incidental to the production and distribution of public service facilities.

The one thing to be remembered is, that other things being equal (and other things always are equal over extended periods), the whole cost of anything, be it a loaf of bread, a pair of shoes, an incandescent light, or a street railway ride, is a labor cost, and nothing but a labor cost. If the persons providing the incandescent light and the street railway ride, like the persons providing the bread and the shoes, cannot sell their product (and base the value of their plants on the receipts which they derive from selling their product) they will lose their incentive to do business.

So that it may be said that under economic law the real value of any industrial enterprise is automatically based on the incentive of those controlling the enterprise to start or remain in business.

# The Hopeful Aspects of Europe

BY FREDERICK P. ROYCE

SO much of a pessimistic character has been said and written by those who from time to time have visited the countries of Western Europe since the armistice, that we naturally look at conditions through a haze of gloom obscuring certain bright spots that indicate that there may be a probability that these countries will return in the not too distant future to a condition of prosperity, which really is so essential to world welfare.

At the outbreak of the war, England, France and Italy were in a somewhat varied degree prosperous and each had great national wealth, which was growing in a healthy manner from year to year.

Without warning these conditions were almost instantly changed. Millions of men who had engaged in all kinds of work which had been producing wealth discontinued such work and engaged in warfare which thereafter reduced the normal increase in wealth to an extent which can hardly be estimated. Moreover, in Belgium, France and Italy, much of the wealth which had been created in past years was destroyed, and the terrific loss of life deprived the belligerent countries of an important part of their wealth producing power for years to come.

Obviously the cost of the war had to be assumed by the Governments involved, although ultimately it must be borne by the people of each country, principally through taxation, so that each nation will pay his or her fair proportion of the total amount expended by Government. Most of the money required for governmental use was raised, in the first instance, through loans, the greater part being of an internal character, although the foreign loans were in the aggregate so large that today they are an important factor in the whole situation. At the same time, in France and in Italy there was a very large increase in the amount of currency issued. There can be no question as to the terrific strain on the nations involved, which produced a condition of financial exhaustion of somewhat varying severity in each. Such a condition was inevitable after the four years of warfare and nothing else could have been expected, yet many who have visited those countries since the armistice seem



to have been so deeply impressed by the truly bad factors in the situation that they have overlooked the favorable ones.

The real question would seem to be in each country, "Is the exhaustion so great that conditions will grow worse, resulting in a state of bankruptcy; will this country drag on as a permanent invalid or will it recuperate and regain its pre-war strength?"

England for many years has been an industrial and maritime country. She has been obliged to import many of the raw materials used in her manufactures and much of the material required to feed and clothe her people. She has, however, developed broad world markets for the product of her industries and for the use of her ships, having become a strong creditor nation. The wealth created was sufficient to stand much of the strain brought on by the war. Today her credit is sufficiently good to permit the purchase of the necessary raw materials, many of which are obtained from her colonies, and rapid progress has been made in regaining the world markets for her products. There is every reason to believe that her pre-war wealth will be gradually restored and afterward increased.

The situation in France is somewhat different—France is more nearly self-contained than the other nations. Most of her requirements in food stuffs are produced at home, as are many of the raw materials which she requires for her manufactures. France has suffered most of the three nations under consideration, both through loss of men and through destruction of property. The psychological effect of four years of fighting on her own territory was terrifically severe and could not have been withstood except by a great nation. While the population of France had not increased rapidly in pre-war days, their wealth had grown and they were one of the great creditor nations.

The French are a hard working, frugal race and are bending every effort to restore the devastation caused by the war, to rebuild their industries and to increase their agricultural products. These efforts are meeting with success, the crops of the country are becoming larger and larger, and while still far from normal the output of the industries is continually improving.

Depending upon the payment of German indemnities ultimately to meet the cost of restoration, the French

Government has borrowed for that purpose, largely on comparatively short time, approximately one hundred billion francs from their own people and has assured them that the indemnities would be paid. The fact which has been growingly apparent and now seems certain, that these German indemnities can only be paid in comparatively small part in the near future, will involve some sort of funding of the temporary internal loans referred to, and it is probable that the need of such funding, as it becomes definitely understood, will create a political crisis the outcome of which is of course uncertain. Obviously the politicians were between the two horns of a dilemma. On the one hand restoration was imperative and the money necessary could only be raised immediately at home. On the other hand, the indemnities had been agreed to and the French politicians could not express a belief that Germany was unable to pay and at the same time have much hope of collecting, as very little can be collected by a creditor who expresses an opinion that a debtor has no money.

It is nevertheless a fact that France is again beginning to create new wealth, and while most of this must for a long time be devoted to meet the cost of reconstruction and to other government requirements, yet it would seem reasonable to believe that as the growing wealth is so applied, the internal short time loans are adjusted and proper provision made for ultimate payment through proper forms of taxation, the credit of the country will improve and very gradually its financial strength will be restored. While much of the wealth of France was destroyed, it must be remembered that by far the greater part remains, that the people are ready to work hard and to save, and that most of her indebtedness is internal. Under such conditions it would seem that those people who for four years had the physical and moral strength to withstand the terrific strain of the war will, with all the natural facilities they have at hand, work out their salvation.

In Italy, conditions are still different. Until about twenty-five years ago their interests were almost entirely agricultural. With the tremendous growth of population it became evident that their territory at home, much of it being of inferior character, was insufficient to provide agricultural facilities for all the people and that the development of industries was essential.

Some of the conditions were not favorable for industrial development. The raw materials which most of these industries required were not to be found at home and must necessarily be imported. On the other hand, they had an intelligent people ready to work, one that could furnish the labor needed for their industries to great advantage. These industries grew with rapidity and at the beginning of the war were of great importance. They were greatly increased during the war.

Italy came into the war rather late, but once in furnished vast quantities of materials and a great supply of men. While the actual destruction of property in Italy was unimportant compared with that in France, yet Italy suffered the loss of a vast number of men, compensated for in part, however, by their nationals who had returned to Italy to enter the Italian army from the countries to which they had previously emigrated.

As in France, the cost of the war was met to a great extent by internal loans and by a large increase in the amount of currency issued, but here, also, the foreign loans made are now of importance.

Since the war, Italy has set to work to put her house in order. Taxation has been fixed at high rates, and while they have not been successful as yet in balancing their budget the deficit is due in a great measure to very large expenditures made for the operation and maintenance of the state owned railroads and to the work of restoration. Less stress has been laid on the probability of receiving indemnities from Germany than in France. As in France, the people are hard working and extremely frugal. Most of them are busy, so that little is heard about the unemployed. It is interesting to note that the Savings Bank deposits have been continually increasing, even during the war period.

A serious hindrance to the restoration of Italian credit during the past four years has been caused by the instability of the Government and the inability to get together under a settled, clearly defined policy. The Cabinet has been composed of men representing many political divisions and subdivisions who have been continually in disagreement. This condition will be cured if the new Mussolini Government is able to show the same constructive ability in governmental matters which it has shown in the organization of the

Fascisti, and which that body has shown in the handling of industrial matters in connection with which it has been such an important factor during the past four years.

Among the more important industrial developments are the steel, rubber, cotton and silk mills and the factories for the manufacture of automobiles, aeroplanes, electrical machinery and locomotives.

Italy has to import many of its raw materials and one of the most important items has been and still is coal. The importations of coal have reached nine or ten million tons in certain years and at high costs. Fortunately Italy has many large water powers available which can be economically developed. Many hydro-electric plants have been built during the past ten years, others are under construction and many others projected.

The use of these hydro-electric plants will do much to reduce the cost of Italian manufactures, and the gradual reduction of coal importation will materially improve the foreign trade balance.

With the disposition on the part of the people to work and to save as much as possible, the policy of the Government to reduce expenditures to the minimum, the willingness of the people to stand heavy taxation and the fixed policy of the new Government to combat socialistic principles, there should be a rapid improvement in the financial condition of the country.

Summing up the situation in these countries, there are bright spots to be found. While much of the wealth that they had at the beginning of the war has been destroyed, by far the greater portion remains. Even assuming that the countries produced no new wealth during the war, they have been for three years, and are now, hard at work producing and for the most part saving.

Their foreign debts represent but a small part of their natural wealth.

The internal debts are heavy and the problems to be worked out are difficult, involving the adjustment of wealth between the people and the governments; but those adjustments will be made in time, and the wealth of these nations on which their credit depends will continue to grow.

# How to Operate Cars to Prevent Accidents

BY W. G. TURNER

[The Eastern Texas Electric Company recently offered four prizes to its trainmen for papers on "Accident Prevention." Exactly 50 per cent of the trainmen competed. The following paper, which secured the first prize, easily merits publication. Mr. Turner has been with the Eastern Texas Electric Company about two years.—*The Editor.*]

## 1. *Car Barn and Barn Switch Accidents*

In leaving the barn with a car, the trainman should always be on the car in time to get everything ready for his run. He should be sure that his front trolley is down and that the air button is turned on and the lights switched the right way. He should then take the switch points and curves slowly and carefully to prevent derailing; and should never pull in front of cars moving out on opposite switches. He should not follow too close behind the car ahead of him. The same care and precaution should be exercised in taking a car in as taking it out. A great many of the accidents are caused by being late in getting out and by being in too great a hurry to get in.

## 2. *Line Accidents*

All kinds of accidents can happen out on the line. To prevent these accidents, the trainman should test the brakes by applying the air to see how they work. If the brakes are not good and he feels that he has not perfect control of the car, he should report it immediately to the dispatcher or the first supervisor he passes. He should not wait until he has an accident and then halloo bad brakes.

## 3. *Street Intersection Accidents*

A motorman or operator should never approach a street intersection with such speed that he cannot stop before running into the cross street. This is especially true of so-called blind streets. Where streets are open and the operator can see the cross street on both sides, he can cross with better speed, and with safety. It is not how fast one crosses a street, but how fast he approaches it. After he has reached the street and flagged it, then he can let her go.

#### *4. Following Automobiles in Crowded Districts*

An operator should not follow too closely behind an automobile at high speed, because he never knows when the driver of the automobile is going to cut off the gas and step on the brakes to make a quick stop. Then if the street car is too close behind the automobile, the operator is up against it. The automobile driver can stop quicker than the operator can; and the result is that the street car runs into the rear of the automobile. When following automobiles at fast speed, the operator should always stay far enough behind so that he will have a chance to stop, should the automobile driver make an emergency stop.

#### *5. Turn Out and Back out Accidents*

These accidents are very frequent in operating along streets where there are all kinds of cars parked along the curb. The operator should use extreme care to avoid these accidents. He has to watch out for the other fellow for he won't watch out for himself. Automobiles often dart out from the curb without warning, right in front of an approaching street car. Then it is up to the operator to stop. In many instances, these accidents occur with persons who will sign a statement to the effect that it was their fault—that they just didn't think. The operator has to be on the alert and think for them. He cannot operate a street car unless he thinks. A good way to avoid these accidents is for the operator to watch for cars where the motor is running. He can usually see some smoke at the exhaust. These automobiles should be watched carefully, as they jump out in front of the street car. The operator should also look to see if anyone is at the steering wheel, and always pass same carefully.

#### *6. Accidents Caused by Automobiles Running into Street Cars*

There are a great many accidents caused by automobiles running into the rear end of the street car. A great many of these accidents could be avoided by the operator making longer stops. Short stops cause the auto following to run into the street car just the same as an automobile making a quick stop causes the street car to run into it. The operator curses the auto driver for stopping quickly and *vice versa*. The operator should not run up close to his stop and then apply a full charge of air unless he wants to hear something bump the back end of his car.

### *7. Head on Collisions*

This form of accident is when an auto and street car meet each other. These accidents usually happen by the operator thinking that the automobile will get off of the track before he meets it.

When the operator sees an automobile coming toward him on the tracks, he should slow down and be ready to stop in case they don't clear the track in time. Auto drivers are careless; they look back and talk to people in the rear seat, and never see an approaching street car. When it is raining and the streets are slick, one has often seen an automobile try to turn off of the car line, the wheel following the rail for some distance before the driver could get off the track. In all cases when accidents might occur, the operator should never forget to sound his gong. This applies to all cases spoken of in this essay; and the operator should not forget to use his gong to make people see and hear. He should step on his gong at cross streets and when he sees anyone approaching a dangerous place.

### *8. Step and Door Accidents*

This is the type of accident which happens at the steps when the car is stopped and the door open for passengers. It occurs by slipping off of the step and stumbling and falling in at the door. The operator is not to blame for these; but if he allows a passenger to catch his car after he has given two bells, he is to blame if a passenger gets hurt. Sometimes an accident is caused by the motorman starting on one bell; for instance, he loads all his passengers that are at the step; he reaches for his bell cord and starts to give bells; a passenger comes around his car whom he has not seen; he has probably given one bell and stop; the motorman being too quick to start, gives one point and having not received two bells, stops suddenly. This is liable to cause an accident, either as the car starts or stops again. The operator should never be so anxious to start his car that he will start on one bell. One bell starts are very dangerous.

Door accidents on safety cars happen very often by the operator being too quick to shut the door. Sometimes there is a passenger who steps fast, and the operator thinks he is going to make a hasty exit; but just as he gets on the step, an auto or vehicle comes along and he pauses. Often the operator

shuts the door, catching the passenger's clothes, grip, parasol, hand or foot, thereby causing an accident. The same thing applies to entering the car. If the operator thinks all are in and shuts the door, and someone on the steps enters the car, "Bang!" goes the door, catching foot or hand in the door. The operator should never close the door until he is sure he has all passengers inside of the car, and all are safely landed on the outside of the car.

#### *9. Inside Accidents*

Now we want to talk of inside accidents. This means all accidents that happen inside of the car, such as breaking glass, getting cut on glass, tearing of clothes. To prevent these accidents, requires just good even temper and carefulness. It has often been seen, no doubt, that on cars where conductor, motorman or operator showed temper one of these accidents would result. Sometimes one tries to raise or lower a window; it doesn't work just to suit him; he gets angry and handles it rough, resulting in broken glass. This sometimes applies to opening and shutting of doors. Often the motorman gets angry because some passengers do not get off or on quick enough and he starts the car with a jerk, causing some passenger to fall, or some child to bump his head. Swinging around curves too fast, especially when all passengers are not seated, is very dangerous, particularly for old people and children. To avoid this, the motorman or operator should take the curves as slowly and smoothly as possible. To prevent all of the above accidents, requires carefulness, good judgment and smooth temper on the part of the trainman.

#### *10. The Motorman—What He Ought to Do and Be*

In finishing this humble little essay, I want to say a few things about what a trainman should do and be. To prevent accidents, first, he should like his work, be really enthusiastic about it, with the desire to give the company and the public the best that is in him; and to do this requires that he keep himself fit for his work. Clean living and good habits leave him at his best. If a man dissipates, loses his proper sleep and rest, he can't go on his job and give his best to his company or the public, because he does not feel at his best. He is sour, has a bad taste in his mouth, can't smile and let his passengers smile with him.



**DON'TS**

Don't unfit yourself for your work.  
Don't get angry when things go wrong.  
Don't count and roll money while operating car.  
Don't make turn in on the line.  
Don't let anyone call your attention off of your work.  
Don't look back and talk to anyone.  
Don't forget you are paid to operate your car.  
Don't forget you owe the company the best you have.  
Don't forget to keep fit for your work.  
Don't forget to keep your temper.  
And all accidents will be reduced fifty per cent.

# Home Folks

BY HENRY W. HARRIS

**W**HO are your home-folks, anyway? "That's easy" you say. "My wife and children, my parents, brothers and sisters, my uncles, aunts and cousins and my in-laws—at least those of them whom I like. I count, too, the fellows I went swimming with, way back, and those dear and intimate friends with whom I now work and play." Just so. Now, when you are away from home, does not almost anyone from the home town look to you like home-folks? At least, do they not appeal more directly to your interest and are you not prone to become better acquainted with them in a shorter space of time than you would have been had you met them as casually at home? Likewise, does not any person or combination of persons which has business relations with individuals or organizations in your own city have a better start with you than those who do not? I venture to say that in nine cases out of ten, they do.

Is it not true that every man and woman who works for a living—or who only just lives—in your town, are really home-folks? Are they not, each and every one of them, putting something of value into the town in the form of labor or beauty or utility and, more than all, of personality? The combined personalities of these toilers is the personality of the city. The composite of their outstanding traits makes the picture of your population. These men and women are all working toward a similar end, the personal one. This is a pretty bold statement. But, after all, is it not true? First, every one is working for a personal living, the food and clothing and shelter which are the basic need of them and theirs. They are striving for the privilege of working under congenial conditions. Personal ambition here steps in and forces them to work for education, advancement, higher responsibilities and emoluments, fame, pretty clothes, leisure for play and pleasure and the thousand and one other things contributory to these. Pride, still personal—for all pride, in its last analysis, is personal—takes a hand and they labor to make the town "better, bigger and busier," because it is a part of them as they are a part of it.

Every organization or association which has its being in your town is home-folks just as much as the individual. They have the same ideals and ambitions; their problems are

similar, though of multiple and varied forms. Your department stores, manufactories, street car company, banks, lighting company and in fact, every religious, social, financial or business organization in your city is working for the community's advancement along with its own. Some of these are home-owned, some owned from away and some by both home and outside people, but all of them are home-run.

They are operated by the same men and women you live with, whom you see on the streets and rub elbows with at the ball game or the movies; with whom you play golf, pool, checkers or cards and to whom you narrate wondrous fishing yarns. These people who eat with you at restaurants and lunch counters are all home-folks. In some cases, perhaps in many, they have not been born in their present home town. Lots of them have been raised there, but others have not come to your city until arriving at a more or less mature age, yet in almost every instance we find that they are keener for the social and civic betterment and more jealous for the good name and good fortune of their adopted and adoptive dwelling place than are a large part of the home born and bred citizens, who, loyal to their birthplace and proud of it, yet accept its benefits, as well as its responsibilities, largely as a matter of course and with less apparent enthusiasm.

The companies they work for are home-companies. They are working for and with you for the good of your town. The fact that any one of these companies can be more efficiently and economically operated through association with some centralized management, does not make it any less yours than is your neighborhood church or fraternal lodge which function under centralized governing heads and towards which you have the strongest feelings of ownership and loyalty. Your baseball team is one of a league and its members are drawn from widely separated points, some quite remote from the town for which they play; your theatres are members of circuits and your railroads are simply units of larger systems. You do not consider these as outsiders at all. They are yours just the same and you think and speak of them as such. Deep down in your hearts, in spite of any faults or foibles, perhaps because of them, you are proud of them and love them in the same measure that you are proud of and love your human home-folks.

## Railroad Building in the Andes

BY ALBERT A. NORTHROP

**T**HE Ulen Contracting Corporation, with which Stone & Webster, Inc. are associated, is engaged in the interesting and important work of forging the last link in the second railroad to cross the South American continent. It will provide a route from New York to Buenos Aires, 450 miles shorter than by the east coast.

Bolivia is the only republic on the American continent which has no outlet by water to the sea. Its location might well be compared to that of Arizona with California a Northern Chile and Oregon a Northern Peru. Its capital, La Paz, would be near Lake Tahoe, which would take the place of Lake Titicaca, where tradition places the birthplace of the ancient Inca religion.

With no seaport of its own it is connected by rail and is completely dependent upon the Chilean ports of Antofagasta (Los Angeles) and Arica (San Francisco), and upon the Peruvian port of Mollendo (Portland, Ore.) It now seeks an outlet to the Atlantic via the Argentine at Buenos Aires, which would compare with a railroad from Nevada to the Mexican boundary and then following the Rio Grande eastward to the Gulf of Mexico at Brownsville, Tex.

The line has been under discussion for nearly a quarter of a century—for as early as 1910, it was considered by a joint commission of engineers appointed by the Bolivian and Argentine Governments. The Argentine line was eventually built to the Bolivian boundary and several unsuccessful attempts were made to build the final link of 124 miles in Bolivia. Only partial success was attained, however, and in July, 1921, the Government signed a contract with the Ulen Contracting Corporation to complete the work. A bond issue up to \$10,000,000 U. S. gold was authorized, and the work is to be completed by the first of May, 1925, which is the centennial of Bolivian independence.

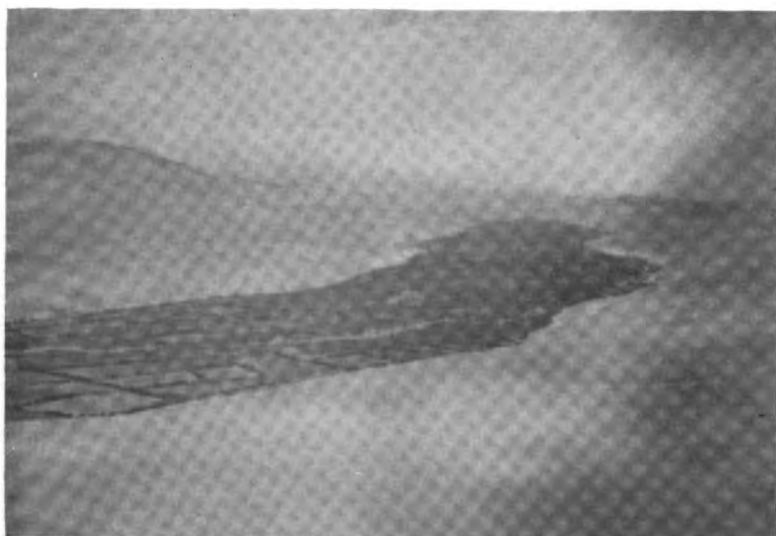
Practically all of Bolivia traversed by the railroads is a great plain, lying between two ranges of mountains. It is at an elevation of 12,000 to 13,000 feet above the sea and is almost devoid of vegetation. It was submerged in the remote past and the old shore line is distinctly marked on the mountain side even to this day. At some of the railway stations



**LA PAZ, BOLIVIA**



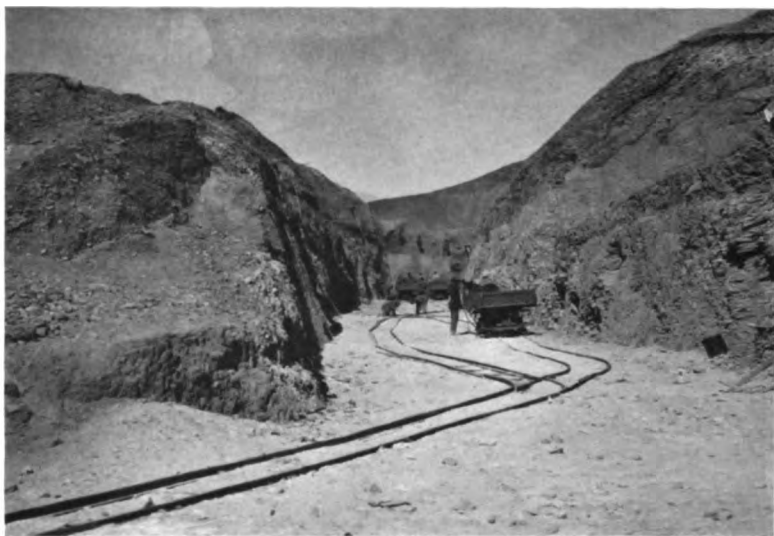
**DESCENDING FROM THE ALTO PLANE TO LA PAZ**  
The sky line was once a lake bed



IRRIGATED VALLEY WHERE RAIN NEVER FALLS



BALES OF ROOTS FOR FUEL, ALTO PLANE, BOLIVIA



**ATOCHA-VILLAZON RAILROAD HAS 3,250,000 CUBIC YARDS OF EXCAVATION,  
75 PER CENT OF WHICH IS ROCK**



**DIVISION HEADQUARTERS**

Indian boys will offer for sale fossils of the life that once existed beneath the waters.

The locating of the line was difficult especially in the canyons where frequently trails had to be notched into the canyon walls before the survey parties could advance. Besides the rivers to be crossed there is much rough country and 700 bridges in all will be constructed.

The railroad, on its way from Bolivia to the Argentine, climbs from the plateau to a pass in the mountain range at an elevation almost equal to the top of Pike's Peak, and then starts to descend, letting itself down along the mountain side on a slope of three feet in every hundred. Like every railroad which crosses a mountain range, it seeks a water course and soon plunges into the canyon of "El Chorro." One after another, three successive water courses are followed, all of which help to form the headwaters of the Rio de La Plata, which empties into the Atlantic some 2,000 miles away. After descending about 4,000 feet the road turns upward again, and for 20 miles the climb continues, until once more the plateau is reached 2,000 feet above.

The construction is difficult at best, and the "masamorras" or mud runs add to the difficulties. Frequently a hillside, or perhaps the entire bed of a valley will become saturated and will flow like lava, carrying everything with it. Such conditions have caused much trouble on the Trans-Andean road from Valparaiso to Buenos Aires.

Fuel in Bolivia is so scarce that in La Paz, llama droppings are a commercial fuel, and a large fungus growth gleaned from the highlands is burned in the electric light plant along with coal imported from England. The locomotives burn English coal in briquette form. Most promising oil indications are said to exist in the southeast of the republic. If oil is once discovered in quantity, the fuel problem of Bolivia will be solved, and this will go a long way toward solving her transportation problems as well.

The Ulen Contracting Corporation has established headquarters at La Paz, with F. T. Hoit as general manager; Paul Campbell, assistant general manager; H. B. Cameron, construction superintendent, and Major H. R. Gabriel, chief engineer.

The wealth that the Bolivian Railroad will carry will not be corn and wheat and wool, but metals—for Bolivia is





**A DOBE BRICKS FOR CONSTRUCTION HOUSES**



**BOLIVIAN LABORERS FROM THE AMAZON HEADWATERS**



RAILROAD THROUGH RAINLESS PART OF BOLIVIA



THE RAILROAD FOLLOWS "EL CHORRO" CANYON



WIRE NET BUNDLES OF STONES PROTECT RAILROAD  
EMBANKMENTS



A BOLIVIAN LAKE OF SOLID BORAX

essentially a land of metals. With the exception of a few fertile valleys at the lowest point, the road is through an agricultural waste. Lionel Portman, an Englishman who has written a book about this republic two miles high above the sea, describes it as "possessing a wealth and variety of minerals such as few countries in the world can show. As the veins of a man are full of blood so are the veins of Bolivia full of metal: of gold and lead and wolfram and antimony and bismuth, but far more important, of tin and silver. Fabulous wealth has come out of them ever since the days of the Incas and before them. And far more fabulous it is certain will come in the future when science and money have had their say, and the whole country will have been made to give up its secrets."

## A Japanese Self-Made Man

NOTHING is more instructive and stimulating than a self-made man. In every field of activity such men have figured largely in art, literature, science and industry. In science we have had such men as Michael Farrady, in industry such men as James Watt and Andrew Carnegie. The Far East has had its notable self-made men also. Among the latter is Soichiro Asano of Japan, for whom Stone & Webster, Inc., is now doing some important engineering and construction work. The story of Mr. Asano's industrial career is as interesting as that of Andrew Carnegie. Isaac F. Marcossin in a recent article in the *Saturday Evening Post* on "The Changing East" writes at considerable length of Mr. Asano, and it is to him that we are indebted for most of the facts here related.

Asano was born seventy-four years ago. His parents had had sixteen children, all girls, and his father despairing of having a son, adopted a boy, who married the oldest daughter, and, in accordance with Japanese law they became the family heirs. Two years later Soichiro was born, but with no patrimony. He was, however, adopted by a physician and became a medical assistant. But being obsessed by the desire to be a merchant prince he soon ran away and returned to his own home, where he built a little weaving and dyeing shop and employed a few girls to manufacture crepe goods, which he carried round on his own back and peddled from store to store. The venture was not successful, and he went to work selling sewing needles. This task carried him rather far afield, and in the course of his wanderings he bought rice hackles, which he sold at home. This also proved unprofitable.

In 1865 he was adopted by a wealthy farmer, but farming was not to his mind and he started in as a trader, specializing in rice. This story is a repetition of the previous one. His adopted parents became discouraged and sent him home, whereupon he started a small matting shop, borrowing money at such usurious rates that the effort was hopeless. In May, 1872, with a small bundle of clothing and 33 yen he made his way on foot to Tokio. In order to keep soul and body together he began to sell drinking water in the streets.

This was in summer. When the cold weather arrived, the

demand for his commodity fell off. Thereupon he went to Yokohama, where he got the idea of selling bamboo sheaths for wrapping food. Now he began to save money and was able to get married. Before long he began to sell wood, coal and charcoal.

Mr. Marcossou tells the following interesting story. In those days the Japanese worker wore a topknot. As Asano became more prosperous his friends advised him to cut his off. He said, "I will not cut off my topknot until I have saved 10,000 yen." In two years he cut it off.

Thus Asano got his start. Noting that all the by-products of the gas works at Yokohama were going to waste, he began to find ways to make them useful. For one thing he persuaded the government cement works to use coke. In 1877 there was a coal famine in Japan, and as Asano had previously acquired a monopoly on the whole coke output of the gas works he was able, to quote Mr. Marcossou, to make his first big stake. When the cholera exhausted the supply of disinfectants the health authorities at Tokio resorted to coal tar as a substitute. Here too, Asano had a monopoly.

He was not yet thirty years old. At that time the present Viscount Shibusawa was the active head of the First Bank in Tokio. It was a rule with Asano to deposit a certain sum of money every month in this bank and never to withdraw any of it. After a while this came to the attention of Shibusawa, who sent a message to Asano to come and see him. Asano's reply was: "I have no time to talk to bank presidents." This naturally only heightened Shibusawa's interest. He sent another invitation with a like result. Finally he sent word to Asano asking him to visit him at his house.

A few months later, about ten o'clock at night, Asano turned up. The house was locked in sleep, but finally a servant appeared. The servant gave a glance at Asano's clothes (he was then and still is rather careless in such matters) and ordered him away. However, he made the man carry in his card and the moment the banker saw it he said, "I want to see this man." Then began an intimate and life-long acquaintance. Shibusawa immediately became the young merchant's principal banker, continuing as his fiscal agent until Asano's enterprises became so large that it was necessary to obtain the added co-operation of Zenjiro Yasuda, one of the most influential bankers of Japan.



SOICHIRO ASANO

浅野 弘一

Before long Asano was a great industrial leader. When the government cement works at Fukagawa were about to be shut down as a result of incompetent management, Asano acquired the plant at a low price. This was the beginning of the Asano Cement Company, which now produces 60 per cent of the total output of cement in Japan, Asano being known as the Cement King.

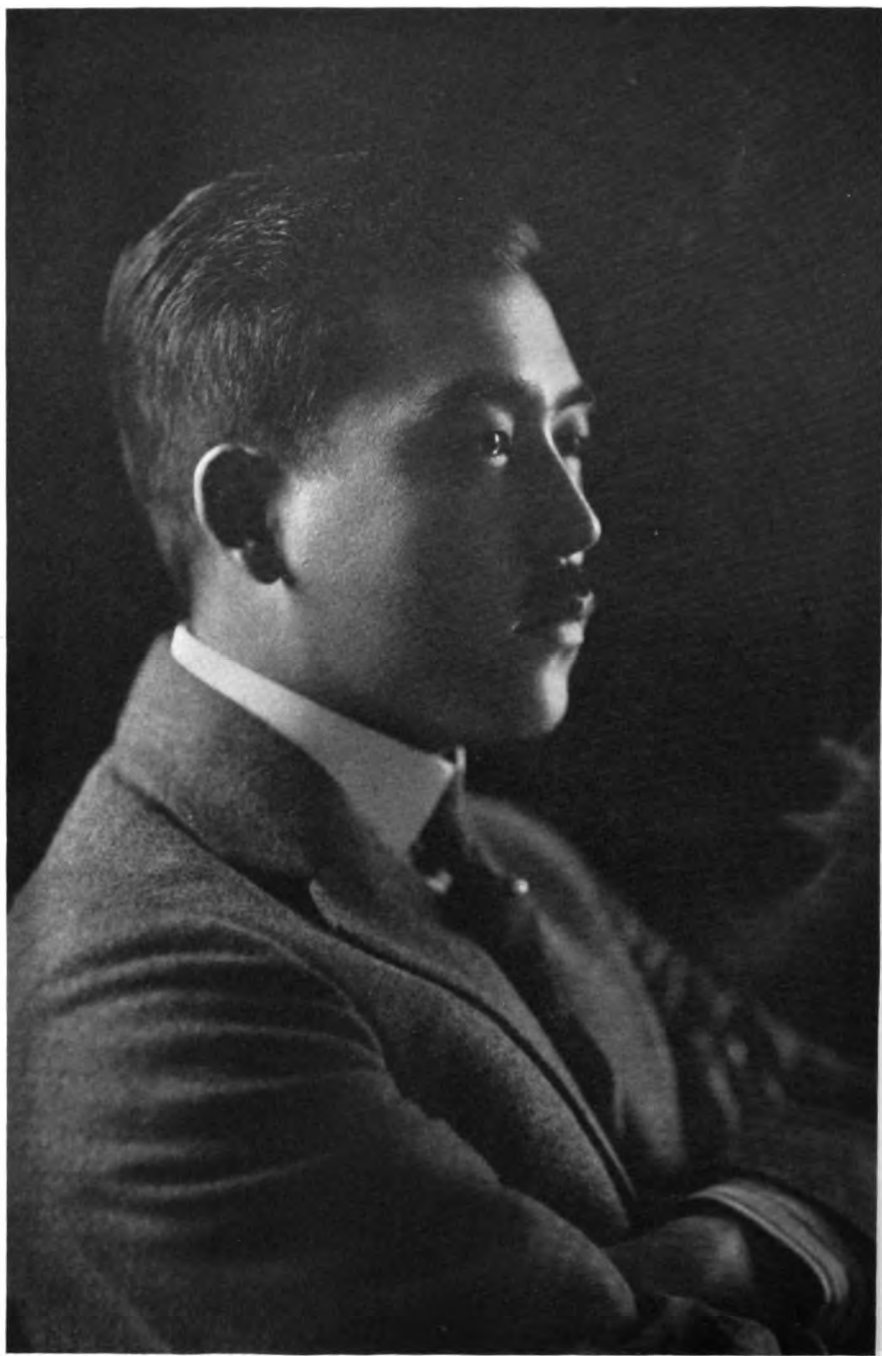
But from the start, Asano's mind had been set on foreign trade. When the cement project was well underway, he organized the Kyodo Unyu Kaisha, which he later sold to the Mitsubishi concern, who used it in the formation of the N. Y. K. In 1884 he started the Ocean Transport Guild. This was the nucleus of the Toyo Kisen Kaisha, the second largest Japanese steamship line at the present time, now operating 200,000 tons.

A shipyard near Tokio was the natural result of these operations, and the way was made easy by the great demand for tonnage created by the World War. The Asano Ship-building Company was incorporated and the plant was located on the sea front at Tsurumi, near Yokohama. Asano appears in a way to have accomplished remarkable results. He took 15 acres of swamp and in a few months had berths and shops well underway. Exactly twelve months after the reclamation work had started a ship of 11,500 tons dead weight was launched. Though Asano was then nearly seventy, he arrived at the works every morning at 5.00 o'clock and stayed until late at night.

Mr. Marcossou says that Asano has touched practically every important industrial activity. He opened up the Iwaki coal district, shortening the haul to Tokio by almost one-half. He was the first to import petroleum in bulk to Japan. He is today, one of the most extensive developers of hydro-electric power in the empire. He has two enormous hydro-electric projects underway, one to supply power to Tokio and the other to Osaka, and it is in the latter connection that he has enlisted the co-operation of Stone & Webster, Inc. Altogether, Asano owns or controls 47 different corporations, and is an active factor in each.

The accompanying picture of Soichiro Asano (on which his signature is imprinted) fully confirms the impression created by the preceding remarks. It is the likeness of a resourceful, determined, self-reliant man.





**RYOZI ASANO**

We also present the picture of Mr. Ryozo Asano, his son, who is associated with him in his industrial enterprises. Mr. Ryozo Asano was educated in this country, is a graduate of Harvard University, and is thoroughly acquainted with American life and institutions.

Mr. Marcossou, who met and conversed with Soichiro Asano, relates that when he spoke of the wretched streets and roads in Tokio, Asano immediately retorted, "I have a scheme for a subway system in Tokio, and if you come back in five years you will find it in operation." This is the remark of a man seventy-four years old, but one full of vast projects for the future.

The following is also attributed to Asano: "In the sixties and seventies a man is only an inexperienced boy. It is not until the eighties and nineties that he can hope to attain real maturity and the prime of life." This seems to have been not an unusual impression among the Japanese, for we recall a great Japanese painter who remarked that at ninety he expected to be able to paint a real picture, or words to that effect. The Japanese evidently do not entertain Dr. Osler's idea that a man should be scrapped at forty.

## The Lincoln Highway and the "Ideal Section"

BY JAMES H. HOOD

ONE of the unusual and interesting projects that Stone & Webster, Inc., have been working on this summer is the "Ideal Section" of the Lincoln Highway.

The following notes on the project are abstracted from statements published by Mr. A. F. Bement, Vice-President and Secretary of the Lincoln Highway Association.

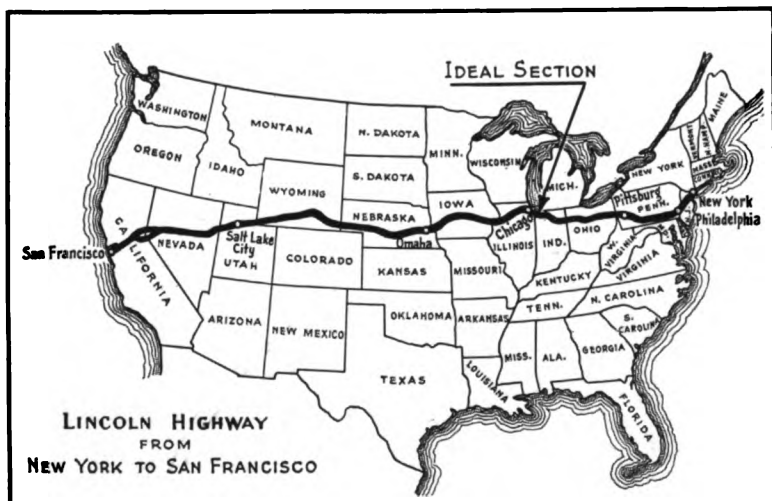
The Lincoln Highway, extending from the Atlantic to the Pacific, dedicated to the memory of President Lincoln, was conceived and promoted with the idea of establishing across the heart of the United States a great main-line arterial road which would some day be the backbone of a nation-wide American Highway System.

In 1913 the Lincoln Highway was a red line traced on the map between New York and San Francisco, traversing 11 states and 96 counties. Then no semblance of a through, connecting road existed west of Pittsburgh. It was estimated that twenty years would be required to complete the construction of an adequate highway 3,300 miles long from the Hudson River to San Francisco Bay. It will not take that long. While the broadening, straightening and beautifying of the route will be in process of evolution for a long time, the opening of a satisfactory road for the traffic of the present, from New York to San Francisco, is an achievement which can even now be foreseen as an actual accomplishment of the early future. It will not be all concrete, of course. Many years must pass before the traffic across Wyoming, Utah and Nevada, or even in Western Nebraska, will warrant the investment necessary to produce a paved highway, but it will be everything that is necessary for the traffic that it is called upon to carry in each state.

American highway history has nearly all been written in the past ten years. Almost any one can recall the situation which existed as late as 1912 and 1913. Then there was no Federal Aid for state highway construction. Then there was, in many of our states, not even a State Highway Department. Then there existed very generally what seems now an inexplicable opposition to the expenditure of money for highway improvement. Then it was impossible to start out in a

motor car from practically any city in the United States for a drive to any other, near or far, with any assurance of getting there, or, for that matter, any exact knowledge of the route to be followed.

In those "ancient" times roads were considered largely a local matter and were handled almost entirely by the township or county authorities. Then the motor truck had hardly started upon its phenomenal development; highway freight transportation was unthought of; interurban hauling unknown; a systematic nation-wide program of highway construction a dream. What was needed then was public education as to the necessity, the economy and the wisdom of



THE LINCOLN HIGHWAY CROSSES TWELVE STATES

highway construction. The national consciousness needed awakening to the benefits of spending money to build roads.

Public education was necessary as to the need for more highway construction and its concentration on roads which led *from* some place *to* some place. The aim of this public education necessarily was, first, the concentration instead of dissipation of the funds being made available under existing laws, and, second, the procuring of better laws which would establish governmental agencies for the selection of those roads upon which improvement could be concentrated with the greatest good to the greatest number, the ultimate desideratum being the active participation of the Federal

Government; roads being the medium of interstate communication, the most important main line arteries being nothing less than national utilities.

For the sole purpose of assisting and co-operating with the various states, counties and the Federal Government in the carrying out of this vast undertaking, the Lincoln Highway Association, consisting of prominent automobile and tire manufacturers and others interested in this work, was incorporated in 1913, with the avowed purpose of "immediately promoting and procuring the establishment of a continuous, connected, improved highway from the Atlantic to the Pacific, open to lawful traffic of all descriptions without toll charges, and to be of concrete wherever practicable." Thus the Lincoln Highway, as the first nationally important through route, was undertaken as an "object lesson road."

Here was a definite undertaking. Here was a start toward an adequate American highway system. Linking New York and San Francisco, the Lincoln Highway was the logical route to form the backbone of a nation-wide transportation system. It was the main line and its founders believed as it progressed toward completion the wisdom of the effort would be appreciated in every section of the country and other organizations would come into being to promote continuous improvement of other through roads connecting with the main line.

While working to bring about the improvement of the Lincoln Highway, the association has had for nine years the financial backing of the men who organized it, and who have been joined in the work by many others who have appreciated its importance. It has never stopped its endeavor to impress the need for more road money, better construction, more adequate maintenance and as a corollary to all these, more business-like and comprehensive legislation and the aid and supervision of the Federal Government.

The work of the Lincoln Highway Association has been most successful for at the present time, all but 60 miles of the first 1,100 west of New York City have been paved. Iowa and Nebraska are further behind, but making every effort to catch up. Iowa last year spent more money on the improvement of the Lincoln Highway than any other state between the two coasts. A paved road across the state for 400 miles can be foreseen. At present, weather conditions affect

the road across both states, but in dry weather the well drained and dragged dirt and gravel grades make the trip from Omaha to Cheyenne, Wyoming, a pleasure. Wyoming will this year, complete her entire 450 mile section of the Lincoln Highway, a boulevard of red granite gravel from Cheyenne out over the Continental Divide and across the Great Plains where ten years ago the chance traveler picked out any pair of ruts on the range that his judgment or his fancy dictated.

West of Salt Lake City, remains the only obstacle to through travel and this will shortly be eliminated through the aid of the Federal Government and a proper road will be constructed across the Great Salt Lake Desert, largely with funds from the National Treasury.

Nevada, with the aid of the Association, has every foot of the Lincoln Highway requiring immediate improvement now under contract, and early completion of a satisfactory highway across the 600 miles of desert and mountains between Salt Lake City and Reno is assured. The trail today is rough in places, but no conditions exist which at any time prevent through travel. From Reno to Carson City, near the California line, to San Francisco Bay, perfect roads and wonderful scenery make a fitting final to the transcontinental trip.

#### THE IDEAL SECTION

For several years the Association had been hoping to be able some day to assist some state to build, for object-lesson purposes, at least a short section of what experience indicates the traffic of the future will require—a section which during the next twenty years could stand as a model of the highest degree of highway improvement.

Through the interest of J. N. Gunn, President of the United States Tire Company, and C. B. Segar, President of the United States Rubber Company, both men greatly interested in future highway developments in this country, the Association was provided with adequate funds to carry out in a tangible form for study and observation the highest practical ideals of the American Highway Engineers and Commissioners.

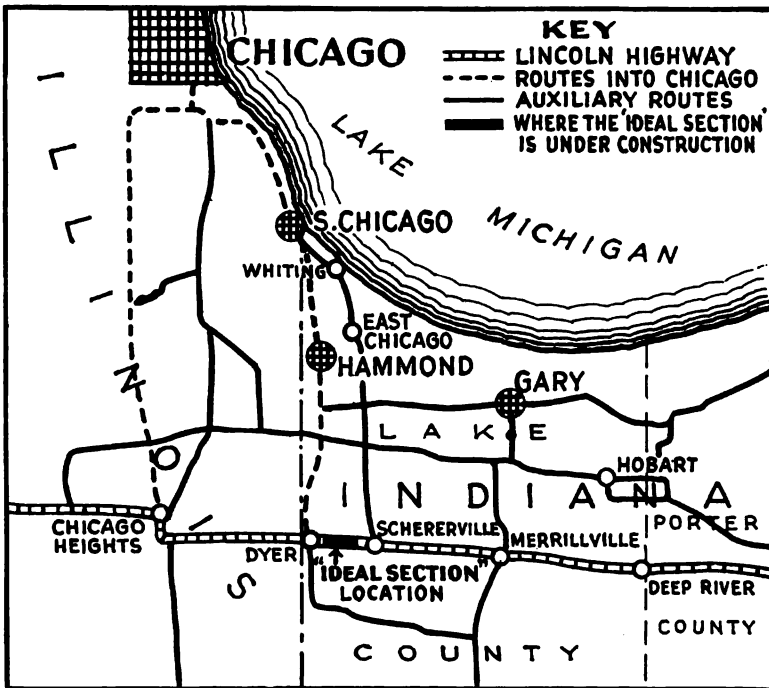
This contribution on the part of the United States Rubber Company was increased by appropriations of the state of Indiana and Lake County, Indiana, and it was decided to



build one and one-half miles of the "Ideal Section" on the Lincoln Highway about 37 miles southeast of Chicago, between the towns of Dyer and Schererville, Indiana.

This location is considered ideal because it is central as regards the United States as a whole, convenient to Chicago, while yet being in open country, and it will be subjected to very heavy traffic.

The design of the "Ideal Section" was of utmost importance and in order to avail itself of ideas from every section of the country, the Association sent questionnaires to 4,600 highway engineers, highway commissioners, and professors of highway engineering. Following this, 15 of the foremost experts in highway engineering and construction and related problems in the United States, acting as the Technical Committee of the Lincoln Highway Association, developed the general plan and this plan was carried out to detailed completion through the collaboration of the Engineering Department of the Indiana State Highway Commission, C. Gray, State Highway Engineer, Lockwood, Greene & Com-



THE "IDEAL SECTION" IS NEAR CHICAGO



pany, Engineers, and W. G. Thompson, the Association's Consulting Highway Engineer.

The section as finally agreed upon consists of a reinforced concrete pavement, 40 feet wide, 10 inches thick, with 80 pounds of reinforcing per 100 square feet, laid in the center of a 100 foot right-of-way, the outer 25 feet of which, on each side, will be landscaped and beautified under the direction of Jens Jensen, the well-known Chicago landscape architect. There will be no open ditches, drainage being provided by submerged drain tile. A sidewalk is included for the safety of pedestrians and the paved way will be illuminated by the most modern and economical system devised by the illuminating engineers of the General Electric Company. Illumination is provided so that motorists may drive with side lights or dimmers instead of headlights, thus eliminating the danger of accident from glare. A 30-foot highway bridge is included in the project. There will be no curves of less than 1,000 feet radius and where curves are required, they will be "super-elevated" to allow for a speed of 35 miles per hour. The 40-foot width of concrete pavement allows four lanes of travel.

All crossings at grade are to be eliminated. All advertising signs are to be prohibited along the right-of-way, and all signs of direction or distance, except those placed or authorized by proper state authority, are to be prohibited.

In designing the "Ideal Section" the Technical Committee had in mind an ultimate traffic volume of 20,000 vehicles per twenty-four hour day and assumed that 5,000 of these vehicles would be motor trucks carrying freight.

The entire project has been carried out under the general direction of A. F. Bement, Vice-President and Secretary of the Lincoln Highway Association.

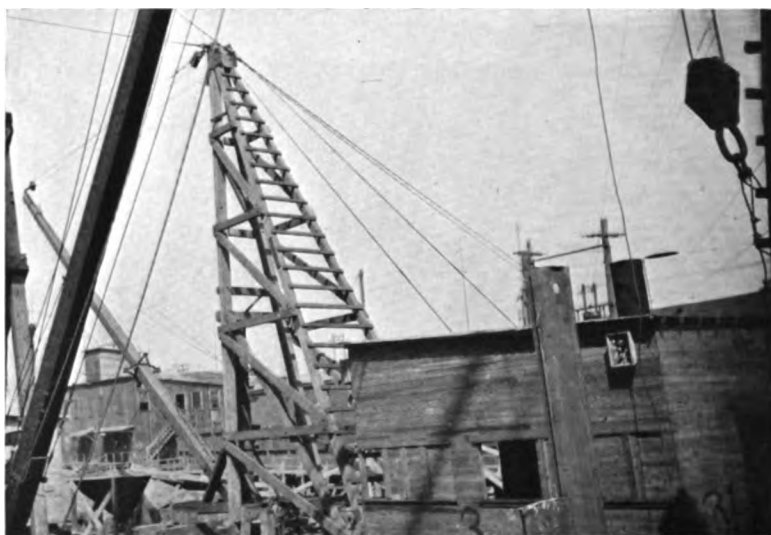
The construction work is being done under the supervision of Stone & Webster, Inc., who are acting as agents for the Lincoln Highway Association, with Ole Davidson as superintendent in the field. The grading and concrete work was let to J. C. O'Connor & Sons of Fort Wayne, Ind., last July and the pavement is now practically completed. Many details, including the lighting installation, beautification of the right-of-way, etc., will remain for accomplishment in the spring.

While it is not expected that many states can undertake,

in the near future, improvements embodying all of the principal elements of the "Ideal Section" design, it is felt by the Lincoln Highway Association that the design will be suggestive and will tend to bring to the attention of the American public the vital necessity of adequacy in present-day specifications, if the hundreds of millions which are now going into highway construction are to properly serve the America of today and tomorrow.



**STEAM SHOVEL IN TURBINE HALL EXCAVATION**  
*Photo No. 1*



**ONE OF MR. MAC'S SKID DERRICKS**  
*Photo No. 2*

## Engineering and Construction Activities

### Construction Methods Used on Foundations for Delaware Water Side Power Station of The Philadelphia Electric Company

**I**N the May, 1921, issue of the *STONE & WEBSTER JOURNAL* there appeared an article describing the methods used in constructing the Delaware Power Station of The Philadelphia Electric Company. Since this plant was put in operation on October 30, 1920, the load of the system has increased so rapidly that a third 30,000 kilowatt turbine has been installed, thus completing the initial step with a total installed capacity of 90,000 kilowatts.

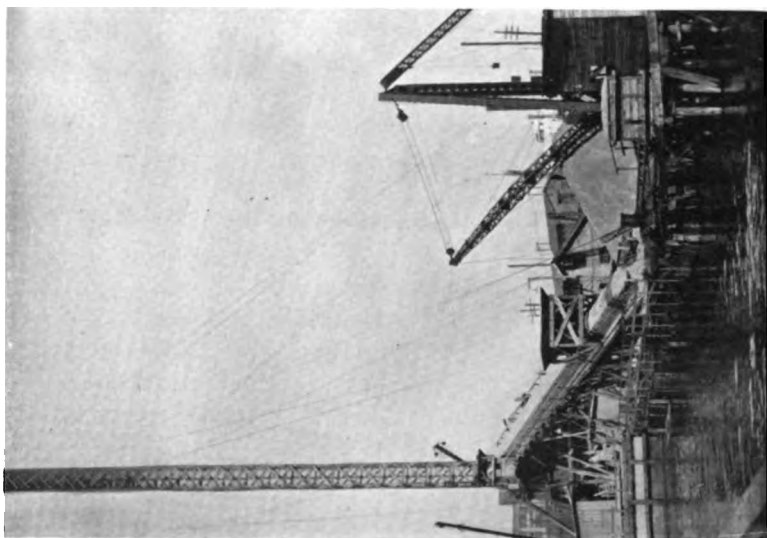
It became evident to officials of the Electric Company early this year that still greater capacity will be required within a comparatively short time, and the Stone & Webster organization was recalled to build the foundations for the second half of this great project in power development. The purpose of this article is to briefly describe some of the methods used in the construction of foundations for the addition to the plant and to show wherein they differ from the methods used on the original job.

Conditions governing the selection of equipment and methods of carrying out the work are essentially different, inasmuch as the entire property was available on the original job for storage of materials and for temporary installations such as a big job of this kind requires. On the present work nearly all of the remaining property is utilized for the permanent buildings, thus limiting material storage and requiring the use of different methods in the actual execution of the work.

The personnel selected for building the foundations differs somewhat from the organization that successfully completed the original job, but we find so many familiar faces that it is hard to realize there has been any interruption to our work or to feel that we have not become a permanent part of the Electric Company's organization.

Mr. J. A. McCampbell (or "Mr. Mac" as he is familiarly known to everyone) is there as general superintendent. Conditions change quite rapidly in the construction business and, therefore, we find some faces missing from the ranks of the previous organization.

J. S. Adey, who was superintendent on the previous work,



THE CONCRETE PLANT FROM THE DELAWARE RIVER  
*Photo No. 3*



POWER CONTROL OF GATES AT CONCRETE PLANT  
*Photo No. 4*

is now superintending the erection of apartment houses at Jackson Heights, Long Island, and the work of actively directing the field force is in the hands of E. F. Blakeslee as superintendent, who came from the American Sugar job in Baltimore.

F. E. Learned, who had charge of the waterfront work and coal unloading tower, is now with the appraisal division of the Boston office.

C. F. Green, who had charge of the engineering work, is now superintending the construction of a power station for the city of Ashtabula, Ohio. The engineering work at Delaware station is being taken care of by Mr. T. T. Walsh, who came from the Baltimore job, and the rigging by Miles Spinney, also from the same job.

Among the familiar faces we find H. F. Hendricksen, purchasing agent; Eliot Felt, accountant; Nate Sherman, general labor foreman; R. A. Rockefeller, master mechanic, and D. L. Bonner, in charge of material.

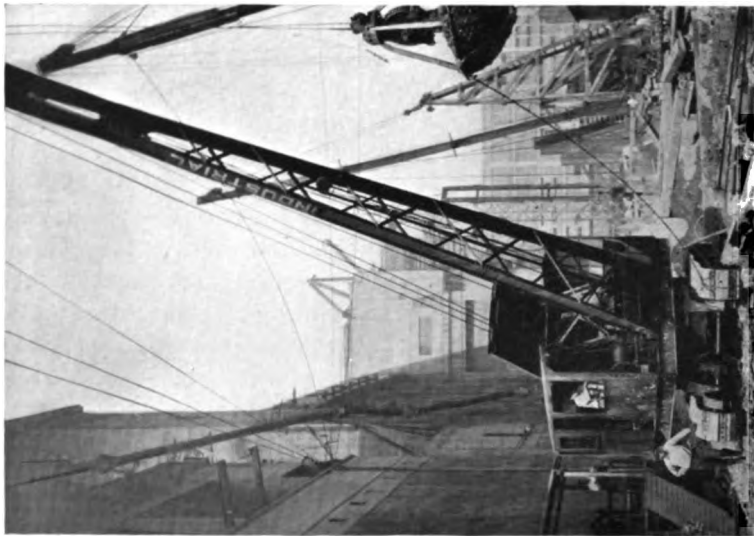
W. L. Barrett, who was in charge of mechanical work on the previous job, has been superintending the installation of oil burning equipment at Jacksonville.

Many others who helped to carry the former job through successfully are still members of the present organization.

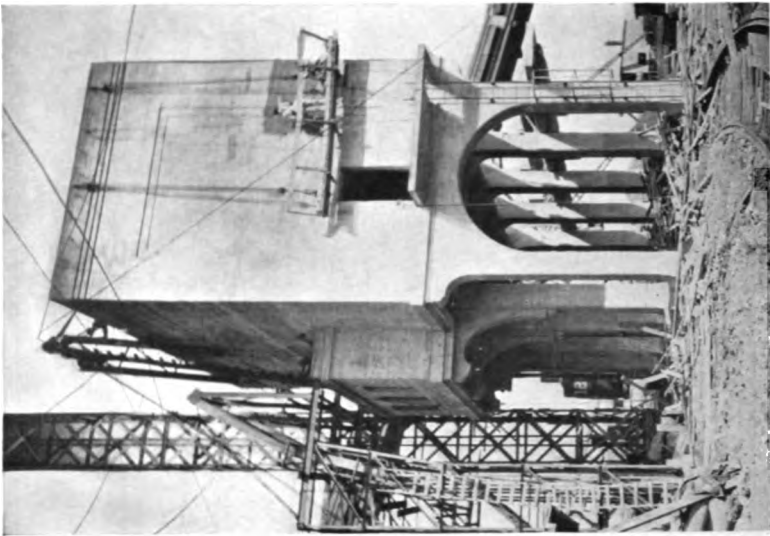
Mr. Alex. Wilson, 3rd, who represented The Philadelphia Electric Company on the previous work, is also officiating in the same capacity on the present job.

The foundations for the original boiler house were circular caissons of steel sheet piling, driven to rock and excavated by means of a jet that was described in the *STONE & WEBSTER JOURNAL* for May, 1921. The assembling of steel piling was done with two 5 ton cableways spanning the area covered by the boiler house. Driving steel piling was accomplished by a steam hammer attached to a revolving mast, the hammer following down the mast as the piling was driven.

In the design of foundations for the extension of the station it was deemed advisable by engineers of the Electric Company and John T. Windrim, the architect, that soil conditions in all excavations should be inspected before the foundations were put in place. This required that methods differ from the previous work, where all concrete for boiler house caissons was deposited in water. Of the 28 piers required for the boiler house foundations, seven were carried



**GASOLINE DRIVEN LOCOMOTIVE CRANE MOUNTED ON  
CRAWLER TREADS**  
*Photo No. 5*



**THE ASH BUNKER NEARING COMPLETION**  
*Photo No. 6*

down in open pits, using four inch tongue and groove wood sheeting. On 11 of the piers steel sheet piling is being used in the form of rectangular cofferdams and the balance of the piers are in the form of circular caissons similar in all respects to the original plan, except that they are pumped out and the concrete deposited in the dry.

Sub-soil conditions were not essentially different from the first job and the presence of timber cribs, logs and debris of all kinds made the driving and excavation of caissons exceedingly difficult. In some of the excavations matted timbers aggregating 20 feet in thickness were encountered.

In place of the cableways used on the original job for assembling the steel sheeting there is now being used a derrick built on the job from ideas originated by Mr. McCampbell and which has become known as a "Skid" derrick. This derrick has the general appearance of a pile driver minus the leads and is equipped with an 80 foot boom. It is readily moved under its own power from one part of the job to another and it has the advantage of mobility and good lifting capacity, as well as the important consideration of being comparatively inexpensive.

Assembling of steel sheeting for cofferdams and caissons is done with the skid derrick, and it also does the driving by means of a steam hammer suspended in swinging leads. Five of these derricks are now in use on the job and are proving a very efficient piece of equipment for work of this character. A view of No. 3 derrick (Photo. No. 2) accompanies these remarks.

On the previous work excavation for the turbine hall was done largely by means of a water jet, whereas this operation on the present work is being done by steam shovel. No special features are used in the handling of about 20,000 yards of material which is required to be removed from this excavation. A view of the steam shovel operating in the turbine hall is presented herewith.

The concrete plant as shown by the illustration presents some interesting features and is a result of much careful study to secure the most efficient and economical arrangement. Concrete materials are received by barge and unloaded by a stiff-legged derrick direct to a loading hopper or to a stock pile on the dock.

The material is transferred by means of a belt conveyor to elevated stone and sand bins and dropped by gravity



to measuring hoppers located directly over a one yard Ransome mixer. An interesting feature of this plant is that all gates are operated by power so that one man performs the functions that ordinarily require from two to four men.

Photo. No. 3 shows a general view of the concrete plant, and Photo. No. 4 a view of power operated control.

Photo. No. 1 shows steam shovel in a turbine hall excavation, and Photo. No. 6 the ash bunker nearing completion.

One of the most efficient pieces of equipment in use on the job is a gasoline driven crane mounted on crawler treads. It easily moves about from one part of the job to another in a few minutes and will perform any of the manifold functions of a derrick or a steam operated locomotive crane. A view of this crane is also shown. (Photo. No. 5.)

#### **A Power Line in the Florida Phosphate Fields**

The 15 mile, 33,000 volt transmission line with step-up plant at Pierce and step-down plant at Standard, now being constructed by Stone & Webster, Inc., will enable the Southern Phosphate Corporation to obtain sufficient power for their present and future needs. The work is under the supervision of J. H. Hood with F. G. Dana as superintendent.

The Southern Phosphate Corporation owns and controls approximately 10,000 acres of land in this vicinity, which is estimated to contain approximately 25,000,000 tons of phosphate rock. The corporation now produces approximately 450,000 tons of phosphate per year and hopes to increase this quantity materially. It does the bulk of the phosphate exportation, its principal competitor in the European field being located in French Algiers.

#### **Five Western Union Jobs**

The Western Union Telegraph Company has just engaged Stone & Webster, Inc., to build a car repair shop in Chattanooga, Tenn. The repair shop will be used to remodel Pullman cars into sleeping and dining cars for work train units.

This is the fifth job we now have under construction for this company. The other four are service buildings at Philadelphia, Albany and Harrisburg and a cable station at Punta Rassa, Fla., which is on the Gulf Coast, south of Tampa. All of the Western Union Work is under the supervision of A. L. Hartridge.

## Conditions In Stone & Webster Territory

*The managers of the companies operated by Stone & Webster, Inc., write to the Management Division of Stone & Webster about the first of each month with reference to conditions in their respective localities during the preceding month. A digest of these letters is published each month in the Stone & Webster Journal.*

### GENERAL NOTES

MR. E. S. WEBSTER spent a successful week at the Tisbury Pond Club shooting ducks, in November.

CAPTAIN JAMES FRANCIS McLAUGHLIN, Secretary BULLkoney CLUB, won the golf championship of El Paso, Tex., during the week of November 19.

MESSRS. KARL BURROUGHS and HANS VITTINGHOFF, of the Boston Office, and MR. TOM P. WALKER, manager of the Haverhill Gas Light Company, have returned from a hunting trip to the Second Connecticut Lakes in New Hampshire. MR. VITTINGHOFF brought down a fine buck with eight point antlers.

The Stone & Webster Bowling League has shown renewed activity during the first part of the 1922-23 season. It is composed of eight teams, which, with their captains, are as follows: Construction, CAPT. W. A. BECKET; Corporation, CAPT. D. C. JEWETT; Drafting, CAPT. G. W. BERRY; Engineering, CAPT. H. P. FESSENDEN; Purchasing, CAPT. E. BENNETT; Statistics, CAPT. WORTHINGTON CORNELL; Stone & Webster, CAPT. JAMES B. MAHONEY and Treasurers, CAPT. H. W. HEARTY. Candle pin matches of three strings are rolled every Thursday, and the standing of the teams, as of November 25, is as follows: Drafting, 20 points; Treasurers, 17 points; Purchasing, 15 points; Corporation, 13 points; Construction, 11 points; Statistics, 8 points; Stone & Webster, 6 points; Engineering, 5 points. In pin fall to the above date, Berry, of the Drafting, is high, with 1,390, followed by Orr, Corporation, with 1,387, and Fessenden, of Engineering, with 1,382. Fessenden leads in high total for single match with 303, followed by Alden, with 294, and Scully, with 293. The single string record is held by Becket, with 120, with Fessenden a close second, with 118.

MR. W. H. BURKE has returned from Miami, Fla., where he made a study of the local transportation situation for that city. He was assisted in this by Mr. J. G. HOLTZCLAW, of the Pensacola Electric Company.

MR. L. C. BRADLEY, district manager of the Texas companies, spent a week here during November. While here he attended the annual Andover-Exeter football game in which his son, Walter P. Bradley, took part as right end on the Andover team.

MR. R. E. L. KNIGHT, of Dallas, Tex., visited the Boston office during November.

MR. F. CLOEN, general superintendent of the Paducah Electric Company, was in this office last month.

MR. J. E. TROMBLA, formerly with the Paducah Electric Company, has been transferred to the Personnel Department to engage in publicity work.

MR. ALAN W. HASTINGS has been transferred from the Statistics Department to Houghton, Mich., where he will become secretary to Mr. S. B. TUELL.

MR. DAVIDGE H. ROWLAND has left the Statistics Department to engage in commercial work in Boston.

MR. JOHN S. FERGUSON, Massachusetts Institute of Technology, has joined the forces of the Statistics Department.

MR. HAROLD R. MILLER has been transferred from the Keokuk Electric Company to the assistant engineering manager's office in Boston.

MR. WILLIAM H. FORD has been transferred from the Drafting Department to the Electrical Division of the Engineering Department.

MR. A. V. SWIFT, of the Drafting Department, later with the Decatur Cornice and Roofing Company, has joined the Structural Division of the Engineering Department.

MESSRS. R. J. GORDON, C. J. HARVIN, H. J. KLOTZ and B. M. LUTHER are conducting a boiler and turbine test for the Columbus Electric and Power Company.

MR. J. T. HAYES and MR. R. R. WISNER have recently been at Columbus, Ga., making a study of the power conditions there.

MR. A. A. NORTHROP has recently presented the picture of and talk on the Caribou development before the following bodies: November 14, Engineering Society of Buffalo; November 16, New York University and also the Brooklyn Engineers Club; November 20, Officials of the Federal Reserve Board of New York City; November 22, Franklin Union, Boston. On November 24, he lectured on and showed a moving picture of the Catskill water supply including the Shandoken tunnel which is being built by the Ulen Contracting Corporation with which Stone and Webster, Inc., is associated, before the student branch of the American Society of Civil Engineers of the Massachusetts Institute of Technology.

We regret to announce the death, on November 4, of MRS. L. H. TABOR, who has for many years been in the employ of Stone & Webster, most recently in the Construction Department. MRS. TABOR was struck and killed by an express train while boarding a standing train at the East Weymouth station.

#### BATON ROUGE, LA., NOVEMBER 20

The Standard Oil Company is running at capacity, and construction work is still under way to increase the facilities of the plant and to increase the capacity of the pipe lines to the plant. The number of employees for October was 3,785 as against 3,128 in October 1921, representing an increase of about 750 employees over the previous year. Other industries appear to be operating at a normal rate.

Wholesalers and retailers in all lines report excellent business for this time of year, and are looking forward to a normal winter business.

Railway receipts for the month of November to date are well over the estimate and are about five per cent ahead of the previous year. Present indications are that for November they will again be in excess of last year. The power station output is running over the estimate, and the gas send-out is about even.

The real estate market continues to be very quiet.

Plans for the construction of a large number of buildings on the grounds of the Greater Agricultural College are nearing completion, and prospects for a great amount of building on the new university by spring seem very bright. Contracts have already been awarded for the construction of a beef cattle barn, warehouse, and cottage. The building committee has also approved plans for the construction of a group of shops for the mechanical engineering department.

Labor continues plentiful and reasonable in price, and there is no great amount of unemployment.

T. L. SMALL, manager, and family returned to Baton Rouge on October 26 after having spent their vacation in Plymouth, Massachusetts. Before returning, Mr. SMALL attended the managers' convention of all companies under Stone & Webster management held in Boston on October 9, 10, and 11. Shortly after his return, Mr.

SMALL was taken very seriously ill and is still confined to his bed. There has been a slight improvement in his condition, but it will probably be several weeks before he will again be able to assume his duties at the office. On account of his illness, Mr. SMALL has resigned the presidency of the Baton Rouge Chamber of Commerce. He was elected to this office on October 16.

M. R. DUPUIS, has resigned his position as billing clerk and is succeeded by Miss OLIVE VARNADO.

J. E. McLEAN, master mechanic, and Mrs. McLEAN announce the birth of a son, J. E. McLEAN, JR., on Sunday, November 5.

GOTHARD SARGL, superintendent, and J. J. MEAGHER, accountant, left Baton Rouge the latter part of November after having completed their work here in connection with the installation of the new 1,500 kilowatt unit at the power station. Mr. SARGL went to Tampa to start work on a construction job for the Tampa Electric Company, and Mr. MEAGHER left for Boston.

The construction job at the power station has been completed by the Division of Construction and Engineering. This work included the installation of a 1,500 kilowatt unit, an extension to the spray pond and the construction of a 1,000 barrel underground oil storage tank. The new unit was placed in service on October 25, and on several days since then has carried the entire lighting and power load at the power station.

#### BEAUMONT, TEX., NOVEMBER 20

Local industries, particularly the refineries, are working to full capacity. The Gulf Refining Company is making good progress on their construction program. According to recent statistics, Port Arthur ranks second in import tonnage on the Gulf, New Orleans ranking first and Galveston third. Petroleum and its products amount to 82 per cent of the Gulf cargoes.

Wholesale and retail business conditions are practically the same as reported last month. The retail merchants report little, if any, improvement.

From the company's standpoint, business is very encouraging in both Beaumont and Port Arthur, as streets are being opened and a large number of new houses are under construction. The South Texas State Fair stimulated railway earnings to some extent, showing approximately a 25 per cent increase the first 15 days of the month over the corresponding period last year. Our steady growth in customers connected has been, and will continue to be for some time, a cause for improvement in our light and power revenues.

There have been no particularly large real estate transactions this month, although a large number of lots for residences are being sold and houses built as rapidly as possible.

Employment conditions are apparently good, and while there seems to be no shortage of labor, everyone is able to secure work, it seems, if they desire it.

Weather conditions have been satisfactory for this time of the year, and have enabled farmers to harvest crops without loss.

Mr. T. H. SMITH, of the Beaumont accounting department, returned home on the twenty-eighth of October, after spending four weeks on work with Mr. WHITTAKER on an audit of the Houston Electric Company.

Mr. A. F. TOWNSEND, manager, was appointed chairman of the Executive Committee for the Chamber of Commerce drive for memberships. Mr. TOWNSEND and his committees made an intensive but quiet drive on November 14, 15, and 16,

and reported unusual success as better than 80 per cent of the prospects interviewed have joined to date.

Mr. W. A. ROBERTSON, superintendent of railways, and Mr. H. C. PRESSLER, master mechanic, attended the Texas Master Mechanic's Club meeting held in Houston on October 16 and 17.

Eight members of the organization went over to Louisiana on a duck hunt on November 17, 18, and 19. Mr. R. B. LANCASTER, assistant treasurer of the Galveston Electric Company came over for the party. Those on the hunt were MESSRS. MILLER, assistant treasurer, DeBOUY, SWIFT, EUGLEY, SMITH and HATLEY of the accounting department, and SPREEN of the light and power department. PETE MILLER got stuck in a bog and had to call on the light and power department to be pulled out, and an alligator scared EUGLEY, who changed scenes without assistance. HATLEY killed a pelican for a goose; and SMITH created havoc among the pulldoos until he was informed that they were not ducks. In spite of it all, they got plenty of ducks and had a successful hunt.

#### BELLINGHAM, WASH., NOVEMBER 22

Although the lumber mills are still operating two shifts they are feeling the pinch of the car shortage and will probably have to close down unless there is some relief in the immediate future. Already most of the shingle mills have closed due to the car shortage but the lumber mills have been able to keep going on account of cargo shipments.

It has been definitely decided by the C. P. R. R. to operate a ferry between Bellingham and Victoria, B. C., and this ferry, which will accomodate 50 automobiles and 250 passengers, will probably be in operation on April 1.

The merchants are reporting an excellent retail business and are looking forward to a good Christmas trade.

The cement plants are still operating to capacity.

Whatcom County Co-operative Dairymen's Association has been particularly successful during the past year, shipping many carloads of chickens and eggs, the latter bringing the grower 55 cents per dozen.

Street railway earnings are showing a decrease due largely to the interruptions on the Main Line on account of rebuilding the Holly Street Viaduct and paving on South Elk Street. Interurban earnings are showing a steady improvement on account of the through Seattle service but the freight earnings are being very seriously affected by the car shortage.

It is difficult to determine what effect the lowered rates in Whatcom and Skagit County will have upon the earnings but we do not anticipate any great decrease. The lower secondary rate should result in the more liberal use of current.

The building situation is about the same as it has been for the past year, all mechanics being employed and many new buildings and homes being erected. Sales of real estate also are showing some improvement with fairly good prices for unimproved property.

There is very little unemployment and employment agencies report that they are unable to fill their requirements at the present time.

Mr. H. B. SEWALL, manager, returned from the managers' convention on October 26, reporting a most enjoyable and educational meeting.

On the night of November 17, a delegation of 40 Bellingham division employees, headed by Mr. H. B. SEWALL, manager, and JOHN HICKOK, railway superintendent, went to Everett by special car and busses to attend the employees dance and

"mixer" held there. The affair was a huge success as an entertainment as well as the amount of favorably publicity gained.

Mr. H. J. GILLE, sales manager of the district office, spent November 17 in Bellingham investigating the new lighting rates that were recently put into effect in Whatcom and Skagit Counties.

H. P. GEISLER, superintendent of gas manufacture, left Bellingham on November 17 to visit several gas plants in the state.

Mr. JOHN H. BISSELL, auditor from the Boston office, spent November 6, 7, and 8 in Bellingham.

Mr. O. W. BENNETT, chief accountant from the controller's office, accompanied by Mrs. Bennett, spent October 30 and 31 in Bellingham. They stayed with C. H. GEORGE, assistant superintendent of light and power, and attended the Hallowe'en Festival given at the Elk's Club.

Mr. JOHN H. BISSELL, auditor from Boston, accompanied by H. B. SEWALL, manager, JOHN HICKOK, railway superintendent, R. W. LINDLEY, assistant sales manager, and C. E. STROOP, assistant treasurer, drove to Vancouver, B. C., on November 5.

Friends of H. P. GEISLER, JR. and Mrs. Geisler will be grieved to hear of the death of their youngest son, Jack Francis, on October 13.

GEO. NEWELL, manager, H. W. GRANT, railway superintendent, P. T. LEE, superintendent of bus transportation of the Southern Division, H. B. SEWALL, manager, JOHN HICKOK, railway superintendent, C. W. HENDERSON, traffic agent of the Northern Division, and W. H. SOMERS, traffic manager of the Seattle office, met in Bellingham on November 1, to discuss tariffs for the entire line and the inauguration of a freight-express service from Mt. Vernon to Everett over the stage line.

H. B. SEWALL, manager, motored to Seattle with Mr. BISSELL on November 9, returning the following day.

The interurban car which was leased from the Tacoma Railway and Power Company arrived in Bellingham on November 9 and was given a trial run over the interurban lines the next day. The car had been completely overhauled and rebuilt for this service. It is 50 feet long, divided into passenger, smoking and baggage compartments and is capable of seating 50 passengers. Power is furnished by four 100 horsepower motors and it will run at a speed of 65 miles per hour.

Mr. JACK RUPPE, chief storekeeper of the Puget Sound Division, called in Bellingham on November 8 and 9.

C. R. NORMAN, engineering department clerk, has left the employ of the company to assist his father in a mercantile venture.

OTTO CARL, price clerk, has left the company and returned to the mills.

Mr. E. L. NICHOLAI is the new price clerk and Mr. HARRY BWYTHYER was recommended by the U. S. War Veterans Bureau for the engineering department clerkship.

#### **BROCKTON, MASS., NOVEMBER 21**

Shoe manufacturers report a satisfactory volume of orders, although they are not running to full capacity, except in a few cases where cheap shoes are made. Other industries also show satisfactory conditions. Business in the retail trade shows a slight falling off.

Business with the company is particularly good considering the fact that the shoe business is not running to full capacity. A recent peak of 13,000 kilowatts was

reached, and an output of 177,300 at a rate of 1.68 pounds of coal per kilowatt hour. This is the largest single day's output in the history of the company. Considerable new business is being taken on daily, 317 additional customers having been taken on during the last 30 days.

Municipal statistics show that this year will be a record breaker in the number of building permits issued and value of new buildings. With one more month to be heard from, this year's record shows 1,370 permits issued for building operations at an estimated cost of about \$2,000,000. Another firm of real estate dealers has recently purchased a valuable plot of land on the west side of the city for development, and has already applied for permits to build eleven houses at a total cost of \$60,000.

The work of extending City Hall Avenue has been completed, and satisfactory progress is being made on the extension of Centre Street. The Green Street extension should be completed within the next month.

It is with deep regret that we announce the death of ARTHUR L. TAYLOR, one of our night inspectors, who met with a fatal accident on the night of November 4. In the regular course of his duties, Mr. TAYLOR had climbed a pole to renew a burned-out street lamp, and while standing on a telephone messenger wire his left hand came in contact with one of the 2,200 volt primaries, causing a shock with resultant fall of about 20 feet to the ground. His head struck the curb stone, causing a fractured skull. Death was reported as instantaneous. Mr. TAYLOR was thirty-seven years old, and leaves a wife and two children. He was a good workman, very well liked by his associates, and will be greatly missed.

MISS MILDRED DELANO resigned her position as head of the billing department on November 11 to prepare for her coming marriage to Mr. Harold Paul of Stoughton. She was given a shower by the office force and presented with table linen and a coffee urn and tray. Mrs. JESSIE HAPGOOD of the billing department will be promoted to Miss DELANO's position, and Mr. GILBERT PERRON has been transferred from the meter department to fill the position left vacant.

MR. RUDOLPH LANDERS, ledger clerk, resigned his position on November 11, as his family has moved out of town, and he wished to remain with them. He was presented with a traveling bag from his office associates, with whom he was very popular. Mr. ROY JENNINGS has been transferred from the collection department to fill Mr. LANDER's position, and Mr. KENNETH DELANO has been employed as collector.

Mrs. RUBY NIGHTINGALE, telephone operator, was married in Lowell on November 17 to Mr. Irving S. Fisher of Brockton.

We had as visitors during the month, Messrs. HUNTER, EUSTIS and GWYNN of the Boston office, and Mr. BERRYMAN, assistant treasurer, of the Lowell company.

#### COLUMBUS, GA., NOVEMBER 20

The condition of all industries is much improved over the same period for last year. Our daily maximum demand for the past three weeks has been right at 30,000 kilowatts, and the average daily output is slightly better than 500,000 kilowatt hours. Of this, Georgia Railway & Power Company is taking around 35,000 kilowatt hours daily.

A new high record mark for the year was established in the cotton market here when the price for strict middling reached 26½ cents, and there is a strong belief that the price for this grade will bring 30 cents before the season closes.

Golden's Foundry & Machine Company have put into effect a nine-hour day and

a six-day week schedule. A large number of unfilled orders and very good prospects for the winter season is given as the reason for this change in operation.

The Columbus Savings Bank & Trust Company have perfected arrangements with the Atlanta Joint Stock Bank for the purpose of lending financial assistance to the agricultural interests of this locality. This new arrangement between the Columbus and Atlanta bank will enable land owners to borrow money at a comparatively low rate of interest for financing their crops.

The Central of Georgia Railway plans to lay additional trackage on the Columbus-Birmingham line to care for the increase in the freight traffic now handled by this road. To date about \$35,000 has been spent by the Central, and their present plans are to expend nearly \$100,000 on the additional trackage.

There is no marked change in either wholesale or retail business over October, but the increase over the fall of 1921 is very noticeable. The increase in retail business, as evidenced by the post office receipts and the monthly bank clearings, shows a good outlook for the coming winter. The local post office is planning to handle a large volume of business within the next two months.

Practically all of the industrial plants here continue to operate on a full time basis.

The railway receipts for the month show around a seven per cent gain over November of last year.

The improvements which the Central of Georgia has begun on the Union Station are progressing rapidly, and it is expected to have all the changes completed within the next month.

The city commissioners have authorized that a preliminary survey be made for an adequate drainage and sewerage system for the city. This work will be done with the idea of mapping out a comprehensive program which will be used to properly take care of all the future needs in Columbus, and looks forward to the annexation of the Wynnton section and other outlying parts of Columbus.

With the improved condition of the textile industry, the labor situation has been materially relieved, and there is very little unemployment here now.

Tuesday night, October 31, the Electric City Benefit Association was host to the employees of the company at a Hallowe'en party and dance.

Brigadier-General Paul B. Malone, the present assistant commandant at Fort Benning has been ordered transferred to the Artillery School at Fort Sill, Okla. The transfer of General Malone has occasioned much regret here as he has been very active in all city affairs.

At the annual meeting of the stockholders and directors of the Chattahoochee Valley Fair Association which was held this month, it was decided, due to the successful outcome of this year's fair, to repeat it next year.

Mr. SPENCER who was injured in the explosion of the gas plant has now entirely recovered from his injuries and is back on the job.

Mr. HARDY CROOM of Savannah and Mr. WEISNER and Mr. HAYES of the Boston office have all been here during the month. Mr. WEISNER is studying our city distribution problem, while Mr. HAYES is going over the power requirements of the company as a whole. Mr. CROOM was here to look over the railway situation with a view of improving the local service from the standpoint of economical operation.

#### EL PASO, TEX., NOVEMBER 14

While there is no material change in general business conditions there seems to be a better feeling among business men. There has been a decided increase in the output of many of our local industries during the month.



Wholesale business houses with the exception of the grocery business report an increase in their business during the past month.

While retail business is reported to have increased during the past month, it is probably due to seasonable sales, there having been much cold weather recently.

Building has again fallen off as compared with last month, permits for October totaling \$106,615, as compared with \$226,714 for September. The permits for October were chiefly for bungalows.

MR. ALBA H. WARREN has returned from Boston, Mass., where he attended a meeting of the managers of the Stone & Webster companies.

MRS. M. F. DONLEY has been employed as stenographer in customers' service department.

MR. J. W. MCNEELY, general superintendent of the Paducah Electric Company, of Paducah, Ky., was a visitor here on business from October 13 to October 16.

MR. ALBERT T. KUNZ is again at his desk after his two weeks' vacation, most of which was spent visiting his friends in Galveston and Houston.

MESSRS. WARREN, DIXON and HIMEL made a business trip this month to Chihuahua, Mexico, to confer with Governor Enriquez of Chihuahua, relative to the company's interest in Mexico.

The wedding of MRS. NORA POGUE, of the lighting superintendent's office, and MR. WALTER BANNER, of the accounting department, took place Tuesday evening, October 24, at seven o'clock, in the First Presbyterian Church, with Dr. Floyd Poe officiating. The church was attractively decorated with palms and yellow chrysanthemums.

Following the national electric home movement, the electrical interests of El Paso have under construction a beautiful home to be fully equipped with all of the conveniences offered by the magic servant—electricity. In order to make this home all that the name implies, the electric interests of El Paso have combined and formed an organization under the name of the El Paso Electric Co-operative Association. This association is composed of all of the electrical contractors and dealers, the electrical manufacturers and the El Paso Electric Railway Company. An executive committee, of which J. F. McLaughlin is chairman, has divided the association into various committees of men from the various interests recognized as leaders in some particular line of the electrical field. The committees are working in full co-operation with the architects, contractors and furnishers, so that the home will be one of the best of its kind. Lehmann & Wuehrmann are the architects; the Orndorff Construction Company is doing the construction, and the electrical work is being done by the El Paso Electrical Contractors' Association, under the direction of the wiring committee.

The house is to consist of eight rooms, built around a patio, after the Spanish style. The Spanish style of architecture is to be followed throughout. This house is to be constructed of hollow tile, finished in stucco, and roofed with red tile. Great care is being taken in the installation of the complete system of electrical wiring under the supervision of L. G. Wainman, of the El Paso Electric Railway Company. It will be open for inspection early in December, and the demonstration period will be of two weeks' duration.

#### EVERETT, WASH., NOVEMBER 23

The lumber industry in general is still suffering the most acute car shortage in history. Cars supplied are about 10 per cent of the demand. This has been further complicated during the past month by embargoes on eastern roads which forbid the

loading of cars to certain points even when the cars are available. The cargo business continues satisfactory, although there has now developed an acute shortage of space for boat shipment. During the past two weeks for the first time in approximately six months, production has been slightly below normal and is being reduced, but shipments are climbing gradually. There seems to be an improvement in the demand for lumber in Australia and recently, due to a reduction of \$2.00 per thousand feet board measure in Japan, there has been a stimulation of the Japanese trade.

The cedar mills are practically all closed and one fir mill, the Canyon Lumber Company, is closed. The cedar mills are enjoying an excellent demand for siding and most of them have their siding stocks actually sold but are unable to get cars for shipment. The lumber men in general do not expect a material improvement in the car situation until after the first of the year. However, as the demand seems to continue, most manufacturers are more or less optimistic.

The wholesale and retail merchants report trade as continuing satisfactory.

Interurban traffic continues satisfactory. According to the latest daily earnings report, the entire line from Bellingham to Seattle shows an increase in growth of 36.2 per cent over last year for the first 20 days of the month. On the city lines at present with the sale of weekly passes, it is very difficult at this period of the month to give a true comparison with last year's business.

Actual connection of customers on the new Lake Stevens, Home Acres and Marysville extension is proceeding satisfactorily.

#### FALL RIVER, MASS., NOVEMBER 22

The Fall River gray cloth market is quiet, but prices of the various constructions of print cloths remain strong, with a steady demand.

Retail business is showing an increase over the comparative period of last year, some stores reporting excellent business.

The sales of gas appliances are at the time of writing large enough to indicate a banner month in the history of the company for this season of the year.

Building permits issued exceed those of the same period of last year by 48, many houses being included in the number.

The shortage of labor is still pronounced, both in the skilled and unskilled classes.

The employees of the company gave a minstrel show before an audience of 700 on the evening of November 8, the show being followed by dancing. Visitors present from other New England public service companies and from the Boston office, included Mr. H. T. EDGAR, Mr. M. L. SPERRY, Mr. H. VITTINGHOFF, Mr. T. P. WALKER, Mr. H. P. DAYTON, Mr. F. C. FREEMAN and about 25 employees of the Providence Gas Company, also nearly 25 employees of the Pawtucket Gas Co., including Mr. G. A. STINESS.

On November 2, Mr. A. D. DUFF, chief clerk, and Mr. C. H. EDLUND, assistant chief clerk, visited the Haverhill Gas Light Company in connection with accounting matters.

We were pleased to have Mr. CLOEN, general superintendent of the Paducah Electric Company, visit us for a few days this month.

On November 9, Mr. A. D. DUFF, chief clerk, and Mr. CLARENCE FISH, voucher clerk, visited the Boston office.

MESSRS. G. L. GILBERT, W. K. EAVENSON and F. P. DEXTER spent a pleasant week-end recently at Mr. ROLLIN BUCKMINSTER's cottage at Riverside, R. I.

A meeting of representatives of the Stone & Webster gas companies in New

England was held at Fall River, under direction of Mr. VITTINGHOFF, on November 8, to consider meter repair shop practice. Fall River was represented by MESSRS. GILBERT and DUNN, Pawtucket by MESSRS. BUCKMINSTER and IRELAND, Woonsocket by Mr. CARL RUCKDESCHEL, Haverhill by MESSRS. WALKER, SCHELL and JONES, New London by MESSRS. EASTMAN, BAKER and DABOL. After spending a busy and profitable day in discussing matters pertaining to meter repairing, the visiting delegates were entertained in the evening by a minstrel show and dance given by employees of the local company.

The new water gas plant at Charles Street has been started and is now in full operation.

Among the recent visitors to the company have been Mr. E. C. HART, assistant treasurer of the Mississippi River Power Company, and Mr. E. A. DAVIS, general auditor of the Middle West Utilities Co. Mr. DAVIS is a former employee of the Fall River Gas Works Co.

At a meeting of the sales managers of New England in Young's Hotel, Boston, on November 10, Mr. W. K. EAVENSON, sales manager, introduced his two guests, J. F. CRAY, shop foreman, and J. W. HOWARD. This meeting was appropriately supplemented by a "Banquet Meeting" of the New England Gas Sales Association. Mr. HILL, of Babson's, gave some very interesting statistical facts relative to the gas industry.

#### FORT MADISON, IA., NOVEMBER 21

The Perfection Tire & Rubber Company closed down on September 30 for an appraisal of its property, and has not been operated since that date. On November 8 the Delaware courts appointed Mr. Charles C. Keedy as receiver. On November 17, Martin C. Wade, Judge of the Federal Court of the southern district of Iowa, appointed Mr. Paul S. Junkin and Mr. Charles C. Keedy as receivers for the state of Iowa. From present indications the Perfection Company will not be operated for several months at least, and the property may be sold to relieve the bond holders and satisfy the creditors.

The American Fork & Hoe Company are gradually increasing their production, and expect to be operating their plant to full capacity about the first of the year. They report conditions in the farming tool industry better than for any time in the past five years.

The W. A. Sheaffer Pen Company are operating both their pen and pencil departments overtime and are swamped with orders. They have a daily production of 1000 Sheaffer life-time pens, and between two and three thousand pencils.

The Continental Machinery Company and the Big Farmer Corporation are only operating in a very limited way at the present time.

Retail merchants are suffering from a loss of business due to unemployment, but with labor conditions constantly improving retail business should be back to normal very shortly. A large number of new employees have entered the ranks of the Atchison, Topeka & Santa Fe Railroad at the shops and former employees of the Perfection Company are gradually securing work in other industries.

The residential and lighting business shows a steady increase both in new customers and consumption. The loss of our largest customer causes a decided decrease in power earnings, and also decreases our purchased power, and general power requirements.

The Methodist Episcopal Church is rapidly nearing completion with the outside walls and roof nearly in place. The construction of the new high school is requiring a

large force of men which helps out the general labor situation and the work is progressing very satisfactorily. The oldest building in the 600 block on Second Street is being torn down at the present time to make way for a modern business block which is to be constructed by Joseph F. Oschner.

The paving of Division Street between Occidental and Morrison Avenues has just been completed, and open to traffic. The paving of this street opens a new avenue for traffic which has been needed for some time from the west end to the central part of the city.

Across the river at the Niota pumping station of the Sinclair Pipe Line Company two new pumping units are being installed which will more than double the pumping capacity of this station.

The Columbia Theatre has just recently been thrown open to the public. This theatre was formerly the old Grand Opera house, and following the fire of last spring has been entirely rebuilt inside, and newly equipped, making it a very modern and up-to-date theatre in every respect.

The Metropolitan Hotel, one of the oldest hotels in this city, has recently changed hands. It will be operated by the new management along the same lines as formerly.

Reports indicate that this year's corn crop is the third largest on record, and averages 96 per cent of a full crop. The yield was approximately 44 bushels per acre. The latest estimates on spring wheat show an average yield of 15 bushels per acre, with a quality of 88 per cent. Winter wheat seeding was generally delayed throughout Iowa, but the acreage is considerably larger than last year. The total potato crop is estimated at 9,000 bushels as compared with 4,000 bushels for last year. The yield has been 98 bushels per acre. The apple crop is also 88 per cent over normal, and approximately six times last year's harvest.

Statistics recently published by the Iowa State Chamber of Commerce show that Iowa leads the nation in agriculture, being first in value of farm property, value of farm land and value of buildings, farm machinery and live stock. It is claimed that Iowa's land is 98.5 per cent tillable. The average acreage per farm is 156.8.

MR. LEVI G. JOHNS, who has been cashier of this company for the past two years, has recently left our employ, and accepted a position in one of the large department stores in Clinton, Iowa.

MR. P. I. ROBINSON attended a meeting of the managers in the Middle West District on November 14 at the offices of Russell A. Pettengill, Inc., Chicago, Illinois.

MESSERS. F. E. LEARNED and JOSEPH SUMMERVILLE of the Boston office were in Fort Madison several days during the latter part of October making an inventory of the property of this company.

MR. Russell Jones, formerly of the Des Moines Chamber of Commerce, has been engaged as secretary of the Fort Madison Chamber of Commerce, and has already started on his work in this city.

#### **FORT WORTH, TEX., NOVEMBER 20**

The condition of local industries in Fort Worth continue on a very satisfactory basis. Practically all manufacturing concerns in the city are operating full forces.

The largest new manufacturing prospect in Fort Worth is a 20,000 spindle cotton mill. Negotiations have been going on for some time, and prominent local business men are interested in the proposition. The opinion is that 40 or 50 per cent of the necessary finances can be secured from outside sources, and the remainder obtained from local subscribers.

The packing houses are showing a slight increase in their output from last year, and are operating approximately 75 per cent of their capacity.

The cattle industry shows great improvement over this time last year, and is improving from month to month. During October there were 28,000 cars of cattle received in the local yards, compared with 25,100 for the same month last year. The prices of cattle and hogs show a good increase over last year. The recent rains over the entire cattle producing territory have been of great benefit to the industry, and will practically assure a good range through the winter.

The recent rains and strengthening of the market have caused the oil industry to increase activities in this section of the state. Fort Worth is still considered the center of oil activities in North Texas, which is evidenced by the fact that both the Gulf Company and the Sinclair Oil Company are moving their North Texas headquarters back to Fort Worth during this month. They both were previously headquartered here.

We are informed that every first class office building in the city is filled, with the exception of approximately one floor in the new Neil P. Anderson building. This indicates very healthy business conditions, and that Fort Worth is getting her share of the new businesses and distributing companies.

The wholesale grocery houses report a good increase in business as do also the hardware and other wholesale concerns. Practically every line is showing an increase, with the exception of the dry goods business, which is not a big factor in our wholesale lines.

The retail merchants report a satisfactory business, with collections continuing good, though the clothing stores have had some difficulty in moving their winter goods, due to the extremely mild weather to date.

The Tarrant County Traction Company is showing an increase of 9.0 per cent over last year for the first 17 days of November. Business on this line has shown a gradual increase for some time past, which we believe is due to the general improved conditions in that territory.

It is expected that the recent rains will insure the best wheat crop since 1919, as well as greatly improved prospects for other grain crops.

We believe the future outlook at this time is somewhat more encouraging than it has been for some time past. We do not expect any unusual business conditions or booms, however, it looks as though a gradual increase might be expected, particularly in the face of the unusual building activities that are under consideration at this time.

The real estate business continues active, with a good demand for moderate priced homes, and a fair demand for other types of homes and office buildings. Building activities in Fort Worth have been fairly brisk, and the proposed construction of 10 large buildings, aggregating \$3,830,000, indicate a return of the building boom.

MR. H. W. WITHERS, claim agent for the Houston Electric Company, was in Fort Worth on business during the month.

MESSRS. P. L. WHITAKER, W. J. FRANCIS and J. H. CLAWSON are in Fort Worth making an audit of the company's books.

MESSRS. V. W. BERRY and J. T. PORTER spent November 17 and 18 in Houston, attending a district master mechanics' meeting.

The first section of our new large smoke stack has been completed. It will be two weeks before it can be finished.

The Texas Interurban Company, the new line from Dallas to Terrell which was

built in compliance with the franchise agreement of the Dallas Railway Company, will begin operation on December 15, according to officials of the company.

It has been definitely decided to electrify the M. K. & T. Railway Company from Dallas to Denton. This was accepted by the city of Dallas as a complete compliance of the franchise agreement of the Dallas Railway Company.

#### **GALVESTON, TEX., NOVEMBER 20**

Custom house records show that vessels clearing from the Galveston customs district reflect an increase of about one-third when compared with the records for September. The Mallory and Morgan Lines are each maintaining three sailings a week from Galveston to New York. Both companies have announced that if the volume of coastwise traffic continues to increase as it has recently they will be forced to inaugurate a schedule of four sailings per week. The Tampa InterOcean Steamship Company has made known that, beginning with December, a regular monthly sailing will be maintained between Galveston and Manila and ports in Southern China. On November 10 the Lone Star Steamship Company inaugurated regular service between Galveston and other gulf ports and Porto Rico.

All commodities exported through this port during October show a gain over the figures for September, with the exception of lumber, metals and lubricating oil.

Cotton exports reached a total of 393,855 bales, an increase of 183,221 bales over September. The first bookings of cotton for shipment to Mexico are being made this month, and indications are that there will be a heavy movement.

Flour exports for October show a gain of 80 per cent over the mark for September.

On November 11 an Italian steamer established a new record for grain cargoes lifted at Galveston, departing for Genoa laden with 422,342 bushels.

A coffee importing firm of New York has signified its intention of importing regularly through Galveston. With the addition of this firm, Galveston will have three coffee importing agencies.

Crude oil imports for the past month aggregated 1,060,000 barrels, reflecting an increase of 353,000 barrels when compared with September.

Business in Galveston is on the up-grade. The large volume of coastwise and export traffic through here at present and the cooler weather seem to be acting as a stimulant to all lines of business.

Railway receipts for the first 19 days of November show an increase of 5.1 per cent when compared with the same period of 1921. This is the first increase shown in our cumulative railway earnings since the month of August, 1921, and is attributable to the fact that on October 26 the Board of Commissioners in Galveston passed an ordinance granting the Galveston Electric Company six cents for full fares and three cents for half fares effective October 28.

The local Shriners sponsored a circus here the week of October 30 to November 4.

Building permits for the month of October reached a total of \$132,818.

The American Realty Company have announced that they will expend \$100,000 for the building of a three-story fireproof, modern apartment house, the construction of which will be under way within a short time.

The first section of the new 20,000-bale addition to the Moody press has been completed and it is estimated that the entire structure will be ready for use in about three months.

The United States Gasoline Corporation will construct a \$250,000 gasoline plant at Texas City. The erection of this plant will begin within the next 30 days.

There is very little unemployment in Galveston at the present time.

The steamship business is very heavy and practically all of the companies operating out of Galveston have added extra help to their forces. The Mallory Line is working a force of between 400 and 500 men regularly.

MESSRS. A. F. TOWNSEND, manager, and P. M. MILLER, assistant treasurer, of the Eastern Texas Electric Company, Beaumont, and ROCK TABOR of the Stone & Webster Engineering Division, Fort Worth, were Galveston visitors during November.

MR. W. E. WOOD, manager of the Houston Electric Company, visited this office during the month.

MR. R. B. LANCASTER, assistant treasurer, spent several days with his parents at Conroe, Texas.

MR. N. J. MILLIGAN, formerly with the Northern Texas Traction Company, Fort Worth, has been transferred to this company as track welder.

MESSRS. R. G. CARROLL, manager, and C. S. MC LIN, superintendent of transportation, spent several days in Freeport on a hunting trip.

MR. R. B. LANCASTER, assistant treasurer, joined several members of the Eastern Texas Electric Company at Beaumont on November 18 and the party spent the week-end on a hunting trip in Louisiana.

MR. GEORGE F. PIERCE, claim agent, has returned and reports that his health has been greatly benefited by his several weeks' stay in Mineral Wells.

#### HALIFAX, N. S., NOVEMBER 24

General business conditions are a little more favorable than for some time and shipping and port business show a decided increase over the same period last year.

Wholesale trade reports business as quiet, while the retail merchants find conditions about normal. Collections are slow.

The company's business remains steady with light and power output showing a slight increase and gas department a slight decrease as compared with the same period last year.

The company has just closed a contract with the municipal authorities for an extensive lighting system throughout the city. This system will have about 1,700 lamps with a load of about 400 kilowatt. The city is spending about \$80,000 in the installation of lamps and fixtures and the company will be put to an outlay of about \$40,000 for necessary extensions to present lines, etc.

The School Board has arranged for the erection of four bungalow schools at an estimated cost of about \$90,000 to help relieve the congestion in certain schools throughout the city. Construction work has already started and the foundations for at least two of these buildings are now practically completed.

MR. W. L. WESTON, manager, accompanied by MR. M. C. SMITH, superintendent of light and power and MR. IRA P. MACNAB, superintendent of tramways, spent a few days hunting during the early part of November and MR. SMITH succeeded in bringing down a fine moose.

A bowling league has been formed among the commercial firms of the city and we are proud to state that a team from this company, composed of MESSRS. DEFORREST, DOUCETTE, BOSTON, HINDLE and PARSONS, is now in first place in their division. A company interdepartmental league has also been formed and some very exciting games have been bowled. Great interest is being taken by the employees and the railway department, not being satisfied with having four of their men representing the company in the commercial league, has also taken first place

amongst the departments. The office team is trying hard but apparently they are more at home with pen and pencil than they are with candle pins.

Report has just been received from Mr. CURTIS, manager, at Sydney that the Cape Breton Electric Company there suffered very serious and considerable damage in a terrific rain and sleet storm on November 22, and our Mr. M. C. SMITH, light and power superintendent, is leaving today with a number of men to assist in the reconstruction necessary.

#### HAVERHILL, MASS., NOVEMBER 22

The business of our shoe factories is steadily decreasing, which is attributed mostly to the unsettled labor conditions. The shoe men state buyers are very cautious in placing orders in Haverhill, except where the manufacturer guarantees deliveries, a thing which they are unable to do under present circumstances.

Local wholesale and retail business is unusually good despite the fact that the industrial situation is going backward.

Our gas send-out continues to show an increase, due to the cold spells which we are having. An increase of 4.6 per cent over the estimate and 7.1 per cent over last year in send-out is shown to date. Most of this increase is due to the fact that during October, 1922, we sold 140 room heaters and radiantfires, and in October, 1921, we sold 39 of these heaters.

The October building permits are as follows: 1922, 67 permits valued at \$158,575; 1921, 52 permits valued at \$96,800. These permits consist mostly of home building.

The number of unemployed is still increasing as only a few of the local shoe factories are working to capacity. No relief in this situation is expected until after the first of the year when it is hoped a new agreement will be signed. The attorneys for the manufacturers and the union are still working on this agreement and the manufacturers are very anxious that this matter be settled, so they can assure their salesmen and buyers of prompt deliveries after January first.

The Haverhill Gas Club held a Hallowe'en Costume Party in Unity Hall on October 26. Over 150 employees and their families attended the party. JOHN LEITH President of the Club, and Mrs. LEITH led the grand march followed by those in costume. The hall was decorated with cornstalks, Jack-o'-Lanterns and pumpkins. The usual Hallowe'en games were played. Music was furnished for dancing by Burton's orchestra, Mr. BURTON being one of our meter readers. Refreshments of squash pie, doughnuts and coffee were served. Mr. H. T. EDGAR, district manager and Mr. LOUIS A. KEENE, manager of the Ponce Electric Company, were guests of the club.

Mr. VITTINGHOFF spent a day in Haverhill during the first part of November.

MESSRS. DUFF and EDLUND from the Fall River Gas Works Company visited our office during November.

Mr. ARTHUR NORTON of the Tufts Meter Works paid us a visit this month.

Mr. GEORGE JONES, meter shop foreman; Mr. H. W. SCHELL, general superintendent; Mr. H. P. DAYTON, assistant treasurer, and Mr. WALKER, attended the conference on meter shop practice and also the minstrel show of the Fall River Gas Works Company's Employees' Club on November 8.

We regret to announce the death of two of our employees during this month. Mr. WILLIAM J. FITZGERALD, who was employed by this company for over twelve years as fireman, passed away on November 10. Mr. JAMES BAKER, also a fireman with the company for five years, passed away on November 14.



MR. FRED CLOEN, general superintendent of the Paducah Electric Company, paid us a visit during the month.

MR. P. L. BLACKWELL, formerly of the statistical department, has been transferred to this company as works clerk.

MR. W. R. BELL, sales manager; MR. C. D. ROBERTS, assistant sales manager; and MR. BENJAMIN CHAMBERS, a salesman, attended the November meeting of the Gas Sales Association.

MR. TOM P. WALKER is spending his vacation in New Hampshire on a hunting trip accompanied by MR. VITTINGHOFF and party.

#### HOUGHTON, MICH., NOVEMBER 20

There has been practically no change in the condition of local industry during the past month. The mining companies are short of labor notwithstanding a recent increase in wages.

Business of the lighting company continues to hold up very well considering local business conditions.

Owing to the season of the year, there is practically no building being started.

The city of Hancock is preparing to ask for bids on a new high school, the voters having approved a bond issue for this purpose. This work is expected to be started in the spring.

So far this fall the weather has been rather mild, which is unusual for this territory at this season of the year.

Shipments of copper from this district for October were reported as 8,017 tons, being the heaviest in many months.

MR. S. B. TUELL, manager, returned from the East on October 21, having attended the managers' meeting.

The L. & T. Club held its monthly meeting on Wednesday, October 25, at the Calumet Y. M. C. A. Supper was served to 75 members. The club was entertained by a class of students from the Calumet High School, who gave a gymnastic exhibition and also two boxing bouts of a few rounds each, which was greatly enjoyed by all. After this event, bowling, swimming, pool, billiards and a game of indoor baseball completed the evening's entertainment.

MR. JOSEPH E. CONDON, of the sales department, and MR. PAUL JACOBS, master mechanic, of the Houghton County Bus Company, spent a few days hunting during the month of November.

The Isle Royale Copper Company has recently declared a dividend of 50 cents per share, payable December 22.

The school bond issue, authorizing the bonding of the city of Hancock for \$275,000 for the erection of a new high school, was voted upon at a special election on November 9, and was carried by a narrow margin.

MESSRS. DAVID W. POLMEAR, WILLIAM J. EDWARDS, GARVIN P. MITCHELL and CLAUD KLASNER, of the accounting department, and MR. STANLEY ODGERS, of the power station, motored to Marquette on Armistice Day to witness the Upper Peninsula football championship game.

MR. S. B. TUELL, manager, left on November 13, on a business trip to Chicago and Lansing.

On Thursday, November 16, the L. & T. Club held its regular monthly meeting at the Hancock car house. A supper was served to 75 members, and the evening's entertainment included moving pictures, a radio concert and community singing.

**HOUSTON, TEX., NOVEMBER 22**

During the month of October shipping from the port of Houston showed an increase of 130 per cent over the year 1921. Shipments handled during the month were valued at \$24,140,892. The total number of vessels arriving and departing from the port of Houston was 108, carrying 225,260 tons.

The general manager of the Shreveport Bottle Vending Machine Company spent several days in our city looking for a factory site.

Passenger receipts for the Houston Electric Company for the first 20 days of November show an increase of two per cent compared with the corresponding period of 1921.

The jitney situation has not developed as rapidly as we expected. The city council notified the Public Service Commissioner that 11 jitneys on the San Felipe line would be eliminated on November 15 and the remaining ones on this line would be eliminated December 1. A few days prior to November 15 the jitney drivers obtained an injunction restraining the city from canceling their licenses before January 1. The case has never gone to trial and as the injunction still stands we do not believe that any jitneys will be eliminated before January 1. At that time, however, we are hopeful that the city will carry out their promise and reduce the total number of 150.

We have resumed our construction work in order that we may be able adequately to take care of the increased riding as soon as the jitneys are partially eliminated.

The city council awarded paving contracts totaling \$432,000 on October 25.

The Houston Lighting and Power Company has announced their intention of constructing a new power plant on the ship channel and have increased their capital stock from \$3,000,000 to \$4,500,000.

The Houston Gas and Fuel Company has announced an improvement program calling for an expenditure of approximately \$410,000; a great portion of this work has been completed and the total is expected to be finished about the first of the year.

MR. LUKE C. BRADLEY is now in Boston on company business but is expected to return about November 25.

MESSRS. A. F. TOWNSEND, manager, and P. M. MILLER, assistant treasurer, of the Eastern Texas Electric Company of Beaumont, visited our office the latter part of October.

MR. W. E. BROWN, superintendent of power, spent several days at his old home in Fort Worth during the week.

MR. B. F. WITMER, assistant to superintendent of the Interurban, was married to Miss Hilda Wall, Monday, November 13, leaving immediately for New Orleans.

The Master Mechanics' Club held a meeting in Houston, November 15 to 17.

MR. LUKE DEVANEY, of the auditing department of Stone & Webster, has arrived in our city and is making an audit of the Causeway accounts.

The Houston Fair and Exposition which was held November 9 to 19, inclusive, proved very successful. Due to the inclement weather the crowds were not as large as were expected.

**JACKSONVILLE, FLA., NOVEMBER 17**

MR. HARDY CROOM paid us a very brief visit during the latter part of October, for the purpose of packing his household goods and moving to Savannah, where he is now located.

W. F. SIMPSON, of the transportation department, was married on October 24, to

Miss May Carleton, of Atlanta. The employees of the company presented the bride and groom with a silver casserole and silver salt and pepper set.

MR. E. T. SMITH, master mechanic of the Savannah Company, came to Jacksonville during the first of the month to assist in preparing a survey of the company's car equipment.

On November 13 and 14 the Rule Book Committee, composed of MESSRS. BIRD, of Savannah, EDWARDS, of Tampa, LONGINO, of Columbus, and BOSTWICK, of Jacksonville, met here to complete the standardization of the rules for the South-eastern companies.

MR. J. P. INGLE was one of the members of the All Florida Friendship tour, which left Jacksonville on November 13, for a trip down the East Coast of Florida, and to Havana. The towns along the route of the tour have welcomed the visitors with open arms, and a feeling of good fellowship has been much in evidence.

During the month the company was visited by MRS. H. R. SHARPLESS, wife of the chief engineer of the Pensacola Electric Company.

#### KEOKUK, IA., NOVEMBER 20

##### *Keokuk Electric Company*

Local industries continue to operate steadily. The American Cement Machine Company and the Standard Four Tire Company both report a seasonable falling off in business. These companies are, however, enjoying a better business than they were during this period last year. The Pechstein Iron Works beginning November 20, started operating one fire a day in their foundry. The number of employees of this company has been doubled during the past year.

The local agents of the C. B. & Q. Ry., and the Wabash report a much better business for November this year than for the same month last year. These railroads have had heavy movements of freight, although they have had less coal shipments during November than in October.

The Hamilton Clay Company of Hamilton, Illinois, have orders for building tile and brick booked three months in advance. Consequently they are operating at full capacity, and are employing between 50 and 60 men. The Marx and Hass Company, also of Hamilton, manufacturers of mens' clothing, are operating on a larger basis than ever before. They now have about 90 employees, mostly women.

Wholesale grocers report a falling off in sales during the past month. Other wholesalers are doing a good business for this season, and collections are much better than they have been in recent months. Local retailers have not had as good a business this month as they had in October, which is no doubt due to the mild weather.

Our gas send-out for November as compared with October, has fallen off, but shows an increase of 13 per cent over the corresponding period of last year. Our railway receipts show a slight increase over those of October, and our kilowatt-hour output shows a gain over the previous month and a slight increase over the corresponding period last year.

Building permits for Keokuk during the past month amounted to \$1,800. There were 18 transfers of real estate, all residence property.

There is practically no unemployment in Keokuk at this time. There seems to be plenty of work available for those who want it.

MR. and MRS. C. C. BUFFUM have returned from their honeymoon, which was spent in Chicago and are settled in their new home in Fort Madison. MRS. BUFFUM was formerly Miss SEIFERT, railway clerk in this office. MR. BUFFUM was formerly

line foreman, but is now electric superintendent of the Fort Madison Electric Company.

Members of the meter department gave a very enjoyable Hallowe'en party to the other employees of the company. The affair was a masked party, and was held in the Club House of the Hancock County Automobile Club in Hamilton. Prizes were offered for the best costumes, and some very original and striking characters were seen.

MR. and MRS. GEO. A. CAMPBELL of Reno, Nevada, visited in Keokuk on their way home from the managers' convention in Boston. While here MR. CAMPBELL was much interested in going over the power house of the Mississippi River Power Company.

MR. DONALD CODE of the sales department has been elected assistant scout master of the troop of boy scouts of St. Peter's Church.

MR. HAROLD R. MILLER who has been transferred to the engineering department of the Boston office was tendered a farewell dinner by the Keokuk Electric Company at the Hotel Iowa on November 6. MR. ALEXANDER, manager, on behalf of the employees presented MR. MILLER with a handsome present.

MR. J. L. ALEXANDER, manager, made a trip to Chicago last week, where all the managers of the middle west district met with MR. RUSSEL A. PETTINGILL who explained the standardization of printed forms in which all companies are interested at the present time.

MISS MAUDE IMMEGART, bogey clerk, has returned from her vacation which included a trip to the Pacific Coast with stops at the large coast cities, the Grand Canyon and other points of interest.

MR. B. E. VAN VLIET and MR. W. W. WALTER of the auditing department of Stone & Webster, Inc., have been in Keokuk for the past two weeks, auditing the books of this company.

#### *Mississippi River Power Company*

MR. C. A. SEARS, manager, accompanied by Mrs. Sears, returned from Boston and other eastern points the latter part of October.

The river packet steamer *Keokuk*, plying between Burlington, Iowa and Quincy, Illinois, made its last trip on November 11 and went into winter quarters at Davenport, Iowa.

#### KEY WEST, FLA., NOVEMBER 20

Activities in the cigar industry during the past month were about the same as they were during the previous month. The cigar output for the month of November will probably show a slight decrease as compared with the October output, due to the fact that some few of the cigar factories have now caught up with their holiday orders, and are beginning to lay off workmen.

Activities in the sponge and fishing industries are still very dull and not much is expected of this line of business until after the first of the year when the regular mackerel and king fishing season will begin.

There has been no material change during the month in the wholesale and retail business, other than dry goods and gents' furnishings, both of which report very favorable business conditions at the present time. This increase is due to the beginning of the holiday trade.

The condition of the company's business during the past month was practically the same as the previous month. We expect the lighting and power gross to show an

increase over the previous month on account of general holiday business and longer nights, which gives us the usual increase over the summer months.

We had expected to get practically all of the Navy business on our lines about the first of November that we are to get, but as yet we are only carrying one of the large sending sets, with rather a small consumption. They are experiencing difficulty in getting deliveries on material such as small motors, electric fans, etc.

There were no important real estate transfers during the month. Building activities have been confined to repairs and additions to buildings which for the month amount to approximately \$8,300.

There were a few cigarmakers laid off in some of the factories last Saturday. It is expected that the factories will continue each week to lay off until about December 15, when practically all holiday orders will be taken care of, and the factories will be operating on approximately 50 per cent normal forces.

There is still a great deal of sidewalk work being done about the city, which is furnishing employment to a great number of common laborers.

Mrs. JESSIE LEE has been temporarily employed as miscellaneous clerk in the accounting department.

Mrs. ROSALIE MALONEY, cashier, has left for her vacation, to be spent at and about Miami, Florida.

Mr. B. L. GROOMS, manager, recently attended an Inter-City Rotary meet which was held at Miami, Florida.

Mr. TALLMADGE CONOVER, student engineer, has been transferred to the Seattle Division of the Puget Sound Power and Light Company, and left for Seattle on November 19. Mr. WILLIAM B. MCGORUM arrived on October 28 from the Boston office to take up the duties of Mr. CONOVER.

Mr. HARDY CROOM has arrived from Savannah to make a study of the street railway situation.

Mr. J. P. INGLE, manager of the Jacksonville Traction Company, visited the city in connection with the All Florida Tour, undertaken by an organization of Jacksonville Boosters. The party visited the principal cities on the East Coast on the "Friendship Unlimited Special" which terminated here. After being taken on a tour of the city, the delegation embarked on the *S. S. Governor Cobb* for Havana where they spent two days. While here, Mr. INGLE and several of the Jacksonville city officials were entertained by Mr. GROOMS.

The Shriners from Miami were in the city recently *en masse*. Functions of policemen and traffic officers were jocularly usurped by them to the amusement of the citizens. Headed by a monster Shriner's Band, the white robed legionaries paraded the streets of the city which were gaily arched with masses of navy signal flags, donated by the Navy Department and strung with the assistance of our line department. The rear of the procession was devoted to local applicants for the privilege of wearing the white bloomers. Under a banner inscribed "The Hero of Stock Island" marched our doughty sheriff, handcuffed and loaded down with a veritable arsenal. No less a celebrity than the Cuban Consul, Hon. Dominguez Milord followed in a baby carriage, crowing delightedly, while a large banner inscribed "Raw Meat" introduced the last straggling remnants of the line. The evening was devoted to a dance at the Athletic Club, and the next morning the delegation returned to Miami.

The sumptuous flying boat *Santa Maria* arrived recently from New York, and is berthed at the dock of the Aereomarine Airways, Inc. Daily service is now in force

between Key West and Havana, the schedule time for the 90 miles being 75 minutes. The rate of fare is \$53.00 one way, or \$93.00 round trip, war tax included.

**LOWELL, MASS., NOVEMBER 25**

Activity continues in the textile mills, and the number employed increases. The Massachusetts Cotton Mills reports a substantial increase in number of employees over July, and advertises it can use one hundred more weavers if applications are made.

Notwithstanding the generally optimistic spirit of a month ago mercantile trade has proved rather quiet, and present indications do not point to any immediate change.

The gross earnings of the company for twelve months ending October 31 show an increase over the preceding twelve months of approximately 18 per cent. This is offset, however, by a heavy increase in expenses due principally to high cost of coal.

The present demand on our station indicates the reflection of increased revenue for the months of November and December. Appliance sales during October, this year, decreased in both number and profit under those for October, 1921. November business to date in the appliance department is rather quiet.

Building activities are confined mostly to frame dwellings. The only large building of importance under construction at present is the one to be occupied by the Five Cent Savings Bank. This promises to be a very modern, well equipped, and commodious bank building.

The total of the real estate transfers recorded at the Middlesex Registry of Deeds for the month ended October 31 was 958.

The commercial department has added to its force, MR. HARRY PRIESTLY, formerly employed for many years by the Lowell Gas Light Company.

MR. ARTHUR J. BERNIER, salesman in the commercial department, won third prize in Class Seven in the recent Thor Electric Washing Machine Sales Contest. MR. BERNIER also tied with two others for first place in prize offer made by the Pettingell-Andrews Company in this same contest.

MISS ELEANOR SUTTON, service secretary, is confined to the hospital after a recent operation for appendicitis.

On Thursday evening, November 23, the employees held the first of a proposed series of "Get-Together Meetings" in the new assembly hall on the third floor of the Market Street office building. This hall, recently added when the office quarters were enlarged, is well equipped for social and business gatherings. The meeting was opened at 7.30 P.M., MR. R. G. CUSTER of the commercial department presiding as chairman with MISS HELENA M. SHARKEY as secretary. After an overture by the Lowell Electric Light orchestra, introductory remarks were made by J. A. HUNNEWELL, manager, which were well received. MR. HUNNEWELL reminded employees of the high standard which all who serve the public must strive for and maintain. This address was followed by a talk by MR. C. W. HALSTEAD, sales manager, on "Getting New Business" which proved very interesting to everybody present. A musical program was next presented followed by group singing, led by J. A. HUNNEWELL, manager. After the serving of refreshments, general dancing was enjoyed.

Chairmen of the different committees were as follows: CALEB ROGERS, entertainment committee, OTTO A. SCHWICKERT, attendance committee, GLADYS L. DODGE, refreshment committee. Much credit is due these employees who contributed much by their generous expenditure of time and effort toward making the meeting a success. Such a good time was enjoyed by all that it was the unanimous opinion that another meeting of this character should be held in the near future.

**MIDDLETOWN, CONN., NOVEMBER 21**

Bornstein & Sons of Patterson, New Jersey, have shipped a large quantity of machinery for use in their Middletown branch which is to be known as the Middletown Silk Company. It is their intention to start operations about December 1.

Control of the W. & D. Douglas Company, manufacturers of pumps, has been obtained by The Premier Mfg. Company of Sandy Hook. It is the intention of the purchasers to carry on operations in Middletown.

The I. E. Palmer Company increased their schedule of working hours from eight to ten per day on November 17.

The company's business shows a decided improvement. During October we had 81 new customers added to our lines and have several new extensions in the works. On November 8, we reached the highest maximum peak ever established on our lines, it being 2,580 kilowatts.

Building during the past month has been confined to alterations and new residences.

MR. PACKARD has returned from his vacation.

MR. PACKARD attended the Cornell-Dartmouth game in New York on November 11, also being a guest of the New York Dartmouth Club at dinner the evening before.

MESSRS. BIRD, TRULL, KEBBE and CURRAN were visitors in Middletown during the month.

MR. CLOEN, general superintendent of the Paducah Company, was a visitor here November 15.

MISS RUTH EASTMAN has joined our accounting department.

H. A. HIPPLER, superintendent, was recently appointed as a member of the auditing committee of the Middletown Chamber of Commerce.

MR. PACKARD was recently elected secretary and treasurer of the Middletown Manufacturers Association.

The office girls of our division have recently organized a bowling team.

**NEW LONDON, CONN., NOVEMBER 21**

In New London industries continue to show an unusually healthy impetus in production of manufacturing products. The machine shops top the list in this respect. The Babcock Printing Press Company are operating with a full force on full time and at present are seeking about 100 experienced machinists for overtime work. The Palmer Brothers Company quilt mill which has been practically closed for the past three years are now operating with a full force of employees on full time and in addition employs an additional force for night work. The New London Ship & Engine Company, manufacturers of high grade oil engines, especially Diesel engines for the U. S. Navy submarines, but also for private interests, are working with an increased force and have more orders than for some time past. The remainder of the industrial field shows and appears to be holding healthy gains.

The maritime activities in the port of New London show marked improvement. At present at least one vessel per week arrives for loading and departs for South America or European ports. Many of these vessels load Canadian wheat which has been shipped over the Central Vermont Railroad, a subsidiary of the Grand Trunk. This road has not been affected by embargo and therefore large quantities of freight have come to the New London terminal for shipment. In one day 132 car-loads of Buick automobiles arrived for shipment to South America and Baltic and Mediterranean Ports.

The final touches are just being put on the new concrete road known as the New

London-Hartford turnpike. With the completion of this road, New London is favored with being a terminus of the longest modern concrete highway in New England. The concrete roadway is 45 miles long. This road opens up a new territory for New London as heretofore due to lack of good highways the territory northwest of the city has been practically closed. Already a noticeable amount of trading in farm produce is apparent as well as much new retail trade for the local merchants.

The increase in kilowatt hours sold and gas delivered, 33 per cent and nine per cent respectively, reflect the prosperity of the company's business. A decrease in the number of meters in service was caused by the closing of many homes at Ocean Beach. The commercial department reports a good month.

MESSRS. BIRD, TRULL and CURRAN attended the American Gas Association Convention at Atlantic City during the past month.

MR. CLIFFORD TRULL, our assistant treasurer, announces the birth of a son, born in the early part of the month.

MESSRS. EASTMAN, BAKER, and DABOLL attended the Gas Metermens' Conference at Fall River on November 8, 1922. They were attendants also at the minstrel show given by the employees of the Fall River Gas Works Company.

The annual meeting of the CoPoCo Service Club was held on Hallowe'en night. The business meeting which was held during the early part of the evening resulted in the election of the following officers for the coming year:

OAKAH L. JONES, president; HAROLD SHEEHAN, vice-president; RALPH GILLETTE, secretary; HAROLD EASTMAN, treasurer; CHARLES HAMBLIN, HILTON KENNEY, board of governors.

After the business meeting dancing was enjoyed. The usual Hallowe'en festivities savored with apples, doughnuts, and cider made the evening complete from a sociable viewpoint.

Rehearsals for Christmas carol singing commenced during November so that a favorable showing should be made at the Christmas party.

MR. O. L. JONES was in Canaan for several days this month.

MR. A. L. KEBBE sat in with the Customers' Relations Committee of the National Electric Light Association which recently held a meeting in Boston.

MR. FRED CLOEN, of the Paducah Electric Company, visited New London during the month.

MR. W. F. ROBERTS, of the Duro Pump Company, is spending a few weeks in New London introducing the Duro water system for rural homes.

MR. A. L. KEBBE, sales manager, has added another duty to his already heavy burdens. Recently he gave his first lecture on "Electricity in the Home" before a class in domestic science at the Connecticut College for Women.

#### NEW YORK, NOVEMBER 28

MR. HENRY R. HAYES has been appointed Chairman of the Public Service Securities Committee of the Investment Bankers Association of America.

MR. E. B. POWELL who sailed on the *Majestic* on October 28, with MAJOR and MRS. FREDERICK POPE, to make a general investigation of power plants, etc., in Europe, was taken seriously ill shortly after his arrival in France and has been at the American Hospital, Neuilly. Mrs. E. B. Powell sailed on the *Aquitania* on November 14 following cable advices received. We are glad to say that recent cables from the physician in charge of Mr. POWELL, indicate a slow but continued improvement in his condition.

MR. THOMAS F. DEVANEY, formerly a member of the Engineering Division, now



connected with Ulen & Company, on their Shandaken Tunnel work, Allaben, N. Y., was married in New York City on Saturday, November 11, 1922, to Mrs. Lottie L. Driscoll. An attractive reception and dance was given by Ulen & Company in honor of Mr. and Mrs. DEVANEY at their Company Hall, Allaben, N. Y., on Saturday evening, November 25.

#### **PADUCAH, KY., NOVEMBER 20**

Every factory in Paducah is in operation and all are running full forces with some of them contemplating additions to their forces. Contract for the Irvin S. Cobb Cigar Company's new factory unit at Third and Elizabeth streets has been awarded and work will commence immediately. Machinery has arrived for the new Claussner Hosiery Mill and most of it is installed. This plant will be in full operation about Christmas. Contracts have been let for the new \$75,000 factory of the Paducah Ice Manufacturing Company, in Littleville near the Union Depot, and excavating started. This plant will be completed and ready for operation about April 1, 1923 and will be one of the most up-to-date ice plants in the South. The connected load of this plant will be approximately 400 horsepower, and will replace two steam plants that this company is now operating.

Four steamboats are being repaired on the docks of the Ayer-Lord Tie Company. Other work is awaiting turn at the marine ways. River business is enjoying a stimulus at this time and much repair work for boats has been contracted. Work is rapidly progressing on the new storage tanks and warehouse of the Gulf Refining Company, at Third and Elizabeth streets.

F. W. Olcott, of Fulton, Ky., has opened a new grinding and machine shop at 122 Kentucky Avenue and it is regarded as one of the best equipped plants of its kind in western Kentucky.

Retail and wholesale dealers report active Fall purchasing in all lines. Approximately 50,000 people attended the Paducah-McCracken County Fall Exposition and retail trade was greatly stimulated by this influx of people from the surrounding territory.

The Lighting Company's balance for Reserves and Surplus for October was over the corresponding month last year. The Railway Company's balance for Reserves and Surplus was also over the corresponding month last year.

The prompt payment discount on electric and gas bills, which was temporarily withdrawn during August and September, and part of October, was re-established on bills mailed after October 25.

Building contractors are completing a number of new residences. There has been no cessation of building, the construction wave which swept over Paducah in the early Spring having gained impetus steadily, making 1922 a banner year for new homes in Paducah.

Labor conditions here at present are the best the city has ever known.

A co-operative association of the dark tobacco growers has been recently formed for the purpose of pooling the crop in this district in order to market collectively and thereby obtain higher market prices for their product. Over 70 per cent of the acreage in western Kentucky has already been signed up and it is estimated by the leaders in the movement that it will increase the normal revenue to the district approximately three million dollars annually.

Announcement has been made by the Cumberland Telephone and Telegraph Company of their intention to make improvements to cost approximately \$25,000

to their lines and equipment in the residential district west of the city in the spring of 1923.

Mr. A. S. NICHOLS, manager, made a short business trip to Chicago on Nov. 13.

Mr. F. CLOEN, general superintendent of the Electric Company, left Paducah on November 4 to visit the Boston office and several of the New England companies.

Mr. J. E. TROMBLA, who has been engaged in publicity work for these companies, was recently transferred to a similar position in the Boston office. Mr. and Mrs. TROMBLA and daughter Janice left Paducah on November 12 for their home in Amesbury, Mass. Prior to their departure the employees gathered in the manager's office to bid them farewell and to present Mrs. Trombla with a silver coffee service as a token of their friendship.

Mr. B. E. VAN VLIET and Mr. W. W. WALTERS recently completed a periodical audit of the books of these companies.

On November 3 a dinner-dance was held by the Elec-Trac Club at their club house at Wallace Park. After dinner, the floor was cleared and the remainder of the evening spent in dancing. Music was furnished by an eight-piece orchestra. The party was well attended by club members and their families, as well as a few invited guests.

Mr. A. S. NICHOLS, manager, addressed the Rotary, Lions, and Exchange Clubs during the month on the subject of "Conditions in Europe." He also spoke to the Retail Merchants' Association on the subject of "Problems of Public Utilities."

Mr. and Mrs. J. A. GORDON spent 10 days in Paducah during the month visiting their son, Roger Gordon, sales manager of the Electric Company. Mr. GORDON is superintendent of the Hamilton, Ill., Division of the Keokuk Electric Company, Keokuk, Iowa.

#### **PAWTUCKET, R. I., NOVEMBER 24**

During November, local industries have experienced a marked improvement. The rising price of cotton has stimulated the demand for cotton yarn and cloth resulting in increased activities in practically all the textile manufacturing concerns in our territory.

The nut and bolt manufacturers are experiencing the best business in their history with no sign of any cessation of new orders. The cotton machinery business, while in a satisfactory condition, shows some signs of falling off. These plants, however, are still operating on a full time basis. The silk manufacturing plants are experiencing better business which points to a steadier operation of these plants in the future.

In general, local manufacturers have been in a very satisfactory condition during the month and business seems to have reached a more stable condition with these concerns.

Local retail merchants report improvement in business and steady gains are shown in fall sales with a good prospect for a large Christmas business. The settlement of labor difficulties has had a marked effect in improvement of business of retail merchants.

The improvement in the local textile situation has produced a marked effect in increasing the company's business, and earnings from sale of power are showing a decided increase. Steady gains have continued throughout the year in lighting business and in view of the large amount of building going on and activities in wiring old houses, we feel that the lighting business will show steady increases.

During the month of October there was a gain of 308 meters in the Pawtucket electric division.

Large manufacturing concerns to whom we sell power are now operating at practically maximum load during the day time and also operating night shifts. The Crown Manufacturing Company is now maintaining a production of about 90 per cent normal. The Dexter Yarn Company are operating about 80 per cent of their machines on a day shift and in a few departments are doing night work. The Waypoyset Manufacturing Company, producers of cotton and silk shirtings, have been operating on a night basis for some time with practically a maximum output during the day time.

The tendency of night operation to increase has become very evident during the past few weeks. More than 50 per cent of the various textile, worsted and woven fabric concerns are on a day and night operating schedule.

The Potter Fine Spinning Company are planning the installation of 80 new spinning frames which will mean an additional load at this plant of 300 kilowatts. The H. & B. American Machine Company has recently shut down its main 700 horsepower steam engine and are now taking their entire power and lighting requirements from this company.

We have reached a maximum load at Pawtucket of 18,390 kilowatt which is somewhat better than we had expected in view of the extremely poor conditions existing earlier in the year.

The improvement in industries and large amount of building in residential sections have produced a steady increase in gas sales and an increase of approximately 20 per cent has been maintained over the previous year.

Building in residential sections still continues to improve and in practically all sections of the city new homes and tenements are being constructed. This class of building has a decided and permanent effect on our lighting business and indications are that Pawtucket has not reached the full development of its residential building.

The H. & B. American Machine Company are adding another story to their machine shop building and this company also has plans for a new foundry to be built in the near future. The J. & P. Coats Company are constructing a new section of mill which is under progress at the present time.

There is a decided shortage of skilled first-class textile labor due chiefly to the recent strike which forced the mills to employ less skilled hands, and we understand the mills are having some difficulty in getting sufficient labor to increase operation at night. There is also a shortage of labor in the machine manufacturing business and recently some of the smaller concerns have had to make small advances in wages to prevent rapid turnover of their working forces.

At meetings of the Boards of Directors of the Pawtucket Gas Company and the Blackstone Valley Gas & Electric Company, November 1 and 2, Mr. WILLIAM MCGREGOR was elected vice-president of both companies. Mr. GARDNER ROGERS was appointed manager of both companies; and Mr. ROLLIN BUCKMINSTER was appointed assistant manager of The Pawtucket Gas Company.

The annual Hallowe'en Party of the Gas and Electric Club was held on Tuesday evening, October 31 in Grand Army Hall. Appropriate games and dancing were indulged in, followed by refreshments of the real old-fashioned kind. The affair was a pronounced success and proved that the new regime of club officers are on the job in earnest.

The baseball players and fans of the Gas and Electric Club of Pawtucket attended a banquet held November 6 under the auspices of the Baseball League. A silver

loving cup appropriately inscribed, which was donated by the Winchester Store, was presented to the Tidewater Street Nine, winners of the pennant. Our guests of the evening were GARDNER ROGERS, manager, ROLLIN BUCKMINSTER, assistant manager and ROBERT JOHNSTON, president of the Employees' Club. JOSEPH CALLAHAN was toastmaster, and one of the features of the evening was the impromptu musical program in which most of the guests took part. MR. E. S. ROBERTS entertained with piano selections. The committee in charge of the banquet were MESSRS. JOSEPH CALLAHAN, ROY MILNE, W. T. SHERMAN and CLINTON THORELL.

MR. SAMUEL H. REID, assistant general manager of the Bureau of Safety of Chicago, recently spent five days going over the property of the Blackstone Valley Company and The Pawtucket Gas Company, interviewing the official staffs of the two companies in the interests of safety for their employees and the public.

As a culmination of MR. REID's visit a Central Safety Committee for the two companies was organized, the first meeting of this committee being held on Thursday, November 16, at which time plans were formulated for a systematic and continuous safety program to be carried on by the two companies. Following the meeting a dinner was held in the Distribution Building, at which MR. REID addressed the officials and department heads of both companies on safety problems in our organization. There were about 45 present at this meeting.

A Safety Council to be known as the Pawtucket-Central Falls Safety Council for Industrial and Community Safety has recently been formed under the auspices of the Chamber of Commerce. MR. ROLLIN BUCKMINSTER, assistant manager of The Gas Company, was elected Chairman of the Committee in charge of this Council.

On Wednesday evening, November 15 a large party from our companies attended the minstrel show at Fall River which was given by the Fall River Gas Company. The trip was made by machines and everyone who attended the show said they spent a most enjoyable evening.

The first educational meeting of the Gas and Electric Employees' Club was held on Thursday evening, November 23. After the short business meeting all the members of the club joined in the community singing under the leadership of CHESTER STACKPOLE of the sales department. The speaker of the evening was MR. L. H. HOWE of the Boston Edison Company who addressed the club on the work done by the Boston Edison Company Loyalty Committee and the Edison Employees' Club. After this talk refreshments were served and general dancing was enjoyed the latter part of the evening.

On November 22 and 23 a meeting of the Southern New England Division Managers was held at the offices of The Pawtucket Gas Company. Those in attendance at this meeting were MESSRS. H. T. EDGAR, division manager, M. L. SPERRY, district manager, J. B. HAYES, A. S. PRATT and N. H. DANIELS of the Boston office; WILLIAM MCGREGOR, vice-president, and managers GARDNER ROGERS, ROLLIN BUCKMINSTER, E. L. MILLIKEN, JOSEPH E. NUTE, V. E. BIRD, H. E. LYLES, A. A. PACKARD. On Thursday MR. R. A. PETTENGILL, of the Boston office, addressed the meeting on the work of the stationery and printing department, which was of much interest to all present.

MR. G. A. STINESS, assistant treasurer, was recently elected chairman of the Finance Committee of the Pawtucket-Central Falls Council of Boy Scouts.

MR. WILLIAM MCGREGOR was elected to the Board of Trustees of the Sayles Memorial Hospital at its recent meeting.

MR. C. S. HILTON, assistant sales manager, was elected Secretary of the Kiwanis Club which has just been organized in Pawtucket.

DR. T. A. MIGHILL has recently come to Pawtucket to conduct special research work for The Pawtucket Gas Company.

MR. ROLLIN H. PERLEY, who joined our sales department about ten years ago, left us on November 1 to accept a position as outside representative of the Duro Pump Company, located in Providence.

MR. JOHN O'NEILL, operator at Number 1 station, recently announced the birth of a son, John C.

MR. WILLIAM B. NICHOLS, electrician, who was the victim of a serious accident last June, has improved sufficiently to permit his reporting for duty, and is at present doing clerical work in the station.

MR. ALBERT CALVERT has thoroughly recovered from his attack of typhoid fever and has again taken up his duties in the engineering department.

#### PENSACOLA, FLA., NOVEMBER 24

For the first time in several years all of the principal local industries are operating at full capacity. The Pensacola Creosoting Company has increased the size of its plant preparing to take care of business in 1923, double that of 1922. The Weis-Patterson Company, manufacturing cypress lumber is working to the limit of its capacity and reports that they are behind on orders. This plant ships over our line about 100 cars of freight per month. The Newport Company manufacturing turpentine and rosin has an output exceeding any time in their history and a ready market for practically all of their product. The Naval Air Station is constructing a large landing field for land plane work. When this is completed, this station will become one of the principal land plane stations in the country.

Prosperous conditions in the rural districts surrounding Pensacola are pointing to steadily improving wholesale conditions. Lumber, naval stores and agricultural crops are bringing comparatively good prices resulting in good business for local wholesalers. Retail merchants report satisfactory fall business up to date.

Light and power conditions are satisfactory. Power station output during October was almost as high as ever recorded and the indications are that this will be exceeded in November. Freight business on the railway for November, December and January will be normal due to temporary business. Permanent institutions established on the Bayshore Line during the past year will assure us that our freight business will never drop back to the small amount that has been customary in past years.

A real estate firm has taken over a considerable area in the West Hill district which will be sub-divided into lots and sold.

Employment conditions in this territory are getting more stable and steady. It is reported that there is an actual scarcity of labor in lumber and naval stores operation in the rural districts. This condition is brought on by the fact that the harvesting season is on and practically all the rural population is busy getting in crops. The large amount of highway work in process is also taking a substantial number of laborers from other lines.

MR. and MRS. C. L. SHINE, who were married on October 17, have returned from their honeymoon. They spent the month visiting in north Georgia and in Kentucky.

MISS ETHEL EYERS is spending her vacation with her sisters in Illinois.

MR. and MRS. B. E. MILLIKEN have returned from an automobile trip to their old home in Savannah, Georgia. They report good roads all of the way and a most satisfactory journey.

Mrs. J. E. Murray, the wife of our assistant treasurer, is expected in Pensacola

early in December. Since the transfer of Mr. MURRAY to Pensacola from Reno, Mrs. Murray has been visiting her family in Austin, Texas.

Mrs. J. G. Holtzclaw has returned to Pensacola from Waynesville, N. C., where she spent the summer. Mrs. Holtzclaw has entirely recovered from the illness from which she has suffered for several years.

PONCE, P. R., NOVEMBER 14

Industrial activities are very low, but it is expected that this condition will change favorably very soon, as the sugar and coffee crops will commence during the next few months. There has been however, a marked improvement in commercial activities recently due to the large number of handmade blouse shops.

As this is the off-season for sugar and coffee, which products are the principal of this island, wholesale business is poor and consequently no large wholesale shipments are being made. Retail business, however, has improved somewhat.

The outlook of the company for the future is encouraging, as the connection with the American Railroad Company's track will increase freight business somewhat.

Quite a number of small houses are being built in the outskirts of the city, but with the exception of one bank building, there is no other important commercial building going on.

Common labor rates are still low, and it is expected that laborers will be paid \$1.00 a day for this year's sugar and coffee crops.

There has been a fair amount of rain during this month, which has considerably aided the irrigation of fields dedicated to the cultivation of sugar, coffee and other products of minor importance. This rain has kept the rivers filled, and has also induced the planters to cultivate more land.

Mr. LEWIS A. KEEN, manager, has returned from the States, where he attended the managers' convention held in Boston, during the early part of October. While there, he visited friends in Connecticut and his family in Maine.

RENO, NEV., NOVEMBER 25

The largest wholesale grocer in the city reports that average prices are rising and that conditions are continuing favorably. The reduced freight rates which were to be put into effect, as mentioned in a previous letter, become effective today within the state, and this will tend to increase shipment from local wholesale concerns. It also means that present business will be shipped by freight instead of parcel post as in the past.

It is felt generally that money conditions are becoming a little tighter, but locally, due to the taxes coming in at this time, the banks will have a little surplus cash temporarily.

During the past month, the Spearhead Mining Company in the Silver City District has shown considerable activity, and has ordered three 50 kilowatt transformers to be installed at an early date. Also, the Buckeye Mining Company has started to unwater their mine preparatory to further development. The Gold Canyon Dredging Company moved the largest amount of material last month that it has so far to date. Judging from the amount of power used, this dredge is now working in better ground than it has in the past. The United Comstock Mines Company is increasing its load gradually, although it is not yet running at full capacity. The company is getting ready to build a transmission line to a new rock crushing plant, which is situated in a canyon approximately five miles east of Reno. This plant will have a connected load of 150 horsepower and expects to be operating by the first of

the year. The Middle Mines Group in Virginia City and the Flowery Group in the Six Mile Canyon, are continuing to operate as in the past, with no immediate prospects of increasing their work.

There is not much change over last month in regard to the market for real estate. The plans for the new Junior High School are completed and the contract will be let for this building in the near future. The cost of this school will be \$200,000 and will be one of the most modern in the state.

The elevation of Lake Tahoe on November 22 was 6,225.31 which is .63 of a foot higher than on the same day a year ago. The precipitation at the lake during the past month exceeds the normal, and the depth of snow now at the Lake is approximately eleven inches, with a depth of several feet at the summit of the Sierra Nevada mountains.

MR. HOWARD F. NEILL and MR. BYRON STEVENS, auditors from the Boston office, are now making their yearly examination of our books, and will probably be with us for at least another week.

ETHEL M. RAE has been employed as stenographer, taking the place of Miss PORCHER, who is resigning to be married next month.

MR. BISSEL, of the auditing department of the Boston office, was a visitor for a few days during the early part of the month. MR. A. R. KEENE was also a Reno visitor for a few days the early part of the week.

MISS BESSIE JONES and MR. CHAS. W. FAIR are now spending their vacations on the Coast.

MR. NEILL and MR. MASON went on a duck hunting expedition last Sunday, but were not very successful.

MR. WENTWORTH left for San Francisco last night to attend the California-Stanford football game. He expects to return the first of the week.

The Nevada University football team closed its season yesterday with a game with Santa Clara College of California, with a score of 7-7. Last week Nevada scored twice on the crack California team, being one of two colleges on the Pacific Coast which scored more than once on this team. Santa Clara College which Nevada played yesterday, was the other team scoring twice against California.

#### SAVANNAH, GA., NOVEMBER 20

The improved conditions existing in the general industrial situation in Savannah which have been noted during the fall months continue with very little change. The fertilizer factories have not decreased their operation, and practically all of the cotton oil mills are now running. As is the practice during this time of the year, the Sugar Refinery has shut down for repairs, and overhauling of its machinery.

During the month of October, 1922, 78 ships entered the port of Savannah with a total tonnage of 211,858. Of this amount the total tonnage of American ships was 179,593. In October, 1921, only 67 ships entered the port with a total tonnage of 174,965.

The custom receipts for October, 1922, amounted to \$311,937 showing a large decrease as compared to September, due chiefly to a decrease in the amount of raw sugar received in the port. However, October, 1922, receipts show a considerable increase over those of October, 1921.

The cotton exports from Savannah since August 1, 1922, amount to 134,868 bales in comparison with 254,400 bales for the corresponding period last year.

In naval stores exports, the shipments of turpentine since April 1, 1922, amount to 23,909 casks of turpentine in comparison with 32,000 for the same period in 1921,

while the exports of rosin were 139,465 barrels as compared with 114,930 barrels during the corresponding period last year.

The gross receipts of cotton since August 1, 1922, amount to 227,674 bales in comparison with 342,015 bales for the same period in 1921.

The naval stores receipts for the month of October, 1922, amount to 10,473 casks of turpentine and 36,804 barrels of rosin. The naval stores receipts since April 1, 1922, amount to 86,504 casks of turpentine and 277,439 barrels of rosin in comparison with 83,955 casks of turpentine and 243,407 barrels of rosin for the corresponding period last year.

Since September 1, 1922, a total of 18,303,000 feet of lumber has been shipped from Savannah—of which amount 3,943,000 feet were shipped to foreign ports.

Although there has been some improvement in local industries, the general business conditions in Savannah continue unsatisfactory. The local retail merchants report business as slack, and that the sale of fall goods is very light—due presumably to the warm weather which has prevailed for several weeks.

The output of our generating plants for the first 19 days of November, 1922, shows a considerable increase over the corresponding period in October, and is larger than that of the first 19 days of any month during the past 12 months. This increase is due primarily to the improved conditions in the fertilizer industry and also to the continued operation of the cotton oil mills. With the exception of the curtailment in the operation of the Sugar Refinery, the outlook for the light and power department for the next few months is bright.

There have been several valuable real estate transfers during the month, and a large number of new houses are now under construction. Plans are being made for the construction of a two-story brick building at the corner of Oglethorpe Avenue and Whitaker Street and another two-story structure on Whitaker Street between Oglethorpe Avenue and York Lane. Preliminary work has been started on the foundation for the Second Baptist Church to be built at Bull and Anderson streets.

It is reported that John M. Geary, superintendent of construction of the United States Public Buildings will recommend a new building to be erected or an annex be constructed to relieve the congested conditions in the post office. Labor of all classes is plentiful.

MR. C. F. W. WETTERER, division manager, paid us a short visit during the early part of the month.

MR. E. T. SMITH, master mechanic, spent several days in Jacksonville, Florida, recently, and also made a brief business trip to Atlanta, Georgia.

The regular meeting of the Savannah Electric Benefit Association was held on November 1 in the Casino at Thunderbolt with a very large attendance. The usual business was transacted—after which community singing was indulged in under the leadership of John Dyer. A very enjoyable entertainment was then given under the auspices of the transportation department. Among the numbers on the program were a vocal selection with piano accompaniment by the MISSES SMITH, daughters of W. D. SMITH, operator; readings by MISS MARY THORN; songs by J. S. MOREL, motorman; a comedy sketch by T. M. WATERS, operator; and song by the MISSES DIXON, daughters of R. H. DIXON, motorman.

MR. R. C. BROOKS, manager, made a short business trip to Atlanta during the month.

MR. W. B. PURSE, superintendent of installation, has returned from his vacation which he spent in North Georgia.

Work has been started on the construction of the track and overhead south on



Ott Street from Anderson to Thirty-Fourth, and thence on Thirty-Fourth Street to the present Daffin Park Line on Waters Road.

MR. W. M. BIRD, railway superintendent, was in Jacksonville several days during the month attending a meeting of a committee on transportation rules.

MR. P. B. MYRICK, paymaster, announced the birth of a son, Pen B. Jr., on November 2.

To promote further interest in the reduction of accidents, a safety contest has been inaugurated in the transportation department. Six teams have been formed, designated by certain colors, and the captains for the teams have been selected. The winner of the contest is to be decided each month, and will be the team with the fewest number of points charged against it.

#### SYDNEY, N. S., NOVEMBER 25

Operations at the steel plant in Sydney and the coal mines of the Glace Bay and Sydney Mines Districts have been such during the past month that everyone is looking forward to happier times in Cape Breton. The October production of pig iron and outputs from all other departments of the steel plant show very substantial increases over the previous months. During the month 29,074 tons of steel were produced from the open hearth furnaces. This marks a new high record, the best previous output having been 25,398 tons in October, 1906.

October coal output of the Nova Scotia Steel & Coal Company, and the Dominion Coal Company Collieries was 329,069 tons, representing an increase of 51,081 tons over September, 1922, and 66,078 tons over October, 1921.

MR. E. P. MERRILL, for the past three years general manager of the Dominion Iron & Steel Company, Limited, the Dominion Coal Company, Limited, and the Nova Scotia Steel & Coal Company, Limited, resigned his position during the early part of November to take over new duties as general manager of sales for the Steel Companies comprising the British Empire Steel Corporation, Limited, with headquarters in Montreal. For the present at least Mr. W. H. BISCHOFF, general superintendent of the Dominion Iron and Steel Company, Limited, will be in active charge of the steel companies, and Mr. H. J. McCANN, assistant general manager of the Dominion Coal Company, Limited, will occupy a corresponding position in connection with the coal mines of the British Empire Steel Corporation, Limited. The British Empire Steel Corporation, it is understood, has recently arranged for an issue of Dominion Iron & Steel Company bonds to the extent of \$4,500,000.

Active construction work has been started on a new cold storage plant to be erected in North Sydney at a cost of \$165,000. It is expected that the plant will be completed next spring.

A new curling rink is to be built this winter at Glace Bay, to cost approximately \$10,000.

Increased subscriptions have recently been obtained in connection with the proposed erection of a new hotel in Sydney, to cost somewhere between \$300,000 and \$400,000. Although all efforts to secure a new hotel during the past three years have been futile, it is confidently believed that next year will see the beginning of work on a hotel to meet the needs of Sydney and surrounding districts.

The increased activity at the steel plant and collieries has improved wholesale and retail businesses to a marked extent. This, with the seasonal activity, has stimulated business throughout the whole district. Commercial travelers report that larger orders are being booked now than for several months, a feeling of confidence in the future having caused the merchants to buy freely.

The retail trade slowly but steadily is commencing to mount to its normal level again. The universal verdict from several of the city's largest retail managers is not only that business is gradually improving, but that it is coming back strongly to the normal level next year on a basis sounder than any which has obtained since the commencement of the war.

Operating expenses during October were reduced considerably, thus making the net earnings and balance for reserves, replacements and dividends better than last year in spite of lowered receipts.

Light and power earnings will undoubtedly show a satisfactory increase over the previous month.

The valuation of 80 new houses constructed in 1922 exceeds the previous high record in 1920 for residential construction. Building activities have fallen off during the past month, the total figure being \$23,920 as compared with the figure of \$136,150 for the month of September.

Twenty-two permits were issued during the month for repairs and miscellaneous construction.

Despite the large decline in October, the total for the ten months is ahead of the 1921 comparative figure.

There were several large transfers of property during the month.

Employment conditions have been steadily improving, although there is no marked shortage of labor at the present time.

Tuesday night, November 21, a wet snow storm succeeded in putting out of commission all the electric light and power, telephone and telegraph wires in Cape Breton. The storm started Tuesday morning with rain which changed to snow by noon, and about 6.00 P.M. wires which had become heavily coated with wet snow began to fall. By 8.30 it had become impossible to keep circuits in at the power house and since telephone and telegraph wires were mixed up with light and power wires on almost every street, it was considered best to pull all switches and make no further attempt to put current on the lines until it might be possible to do so without endangering lives. Wednesday morning the work of reconstruction was begun and by evening the main power circuit, serving the telephone company, newspaper offices and industrial plants was in operation. By evening lights were also turned on in the central portion of the city. By Thursday night it had been possible to turn on lights over a large portion of the city served by our main leads, but branch lines and side streets had to be cut off, since poles, wires and street lighting fixtures were down in many places. At the time of writing, there still remains probably a week's work before all lighting customers will be reconnected.

MR. C. C. CURTIS, manager, was one of the representatives of the Sydney Board of Trade at a meeting of the Sydney Mines Board of Trade, which took the form of a banquet and entertainment on November 16.

MR. AUBREY BEATTIE, formerly of the statistics department, has taken up his duties as secretary to the manager. MR. and MRS. BEATTIE arrived in Sydney on October 31.

MESSRS. I. P. McNAB and M. C. SMITH of the Nova Scotia Tramways and Power Company, Limited, paid us a short visit the latter part of the month, looking over our snow fighting equipment. MESSRS. McNAB and SMITH made the trip by motor and reported the roads in excellent condition.

#### TACOMA, WASH., NOVEMBER 22

The beginning of the rainy season is looked to by retail sales organizations and

wholesalers as a stimulant to that fall business which is seasonal. Improvement is noted in retail trade and indications point to a good volume of holiday business.

Construction of small homes continues in good volume and labor is well employed.

Bank clearings for past two weeks show a substantial gain.

With few exceptions, commercial and industrial institutions in Tacoma are working to capacity. The car shortage will be relieved to such an extent that transportation facilities will not handicap the trend of progress..

Thirty-one agencies in the Community Chest for 1923 will require \$303,120.30 in Tacoma. Committees are at work this week to raise this amount.

The National Bank of Tacoma has this month established agencies in two outlying business districts for the accommodation of its patrons.

Travel to Mount Rainier, National Park (76 miles from Tacoma) for the 1922 season increased 25 per cent over the previous high record in 1920. Travel entering the park this season totaled 17,149 cars and 70,376 persons.

Weekly pass sales continue to increase each week—a total of 11,000 having been sold during the eighteenth week. This weekly pass was placed on sale on July 24, 1922 and during the first week, 7,007 passes were sold. Jitney competition has been strong since the inauguration of the pass, but is gradually being lessened and with the rainy season coming on will probably go entirely.

The Puget Sound Power & Light Company recently completed a lighting extension to the Mountain View district near Puyallup and to celebrate the occasion entertained approximately 300 residents of the district last Friday evening. Through the Work and Play Club the entertainment was arranged, which included music, vaudeville acts, short talks by officials of the company and residents of the community.

Mr. W. L. ROBBINS, engineer, accompanied by Mrs. Robbins, has gone to California on one of the Admiral Line steamships for a short vacation trip.

The Electric Co-operative Committee, a very effective organization composed of a central committee of 15 employees of these companies, and 15 associated committees of five members each, all members being officials and employees of these companies, has been organized for sometime in Tacoma for the purpose of promoting and encouraging a better understanding between the companies, their employees and the general public. Commencing this month a bulletin of information to employees will be issued twice each month, containing information concerning the companies, employees, and their relations with the community which they serve. Subjects chosen for November and December bulletins are as follows:

The Public Utility and Private Enterprise, ancient and modern; The purpose of a Modern Utility Organization; The basis of rate making and why; Fair consideration of service requirements.

The subjects have been carefully selected by the committee and cover in a general way many phases of company work, problems, etc.

#### TAMPA, FLA., NOVEMBER 21

Cigar industry continues active on holiday orders and shipments of citrus fruit are beginning to move. The citrus fruit crop is exceptionally large and the quality excellent this season, which should bring marked prosperity to this section.

Wholesale houses report improved conditions during the past two months. Retail business, particularly in groceries and meats, shows marked improvement, due partly to winter visitors arriving in greater numbers and earlier than usual.

Railway department earnings show an increase over November, 1921, but we

attribute this to the curtailment of service during the first part of November, 1921, following the October hurricane. Lighting department earnings show substantial increase, partly due to loss of revenue for the first few weeks of November, 1921, on account of storm damage to lighting lines in the residence districts.

It is anticipated that real estate will become more active when work on the new roads, to be built throughout the county, begins.

Labor situation is quiet. The local supply of labor is increased at this season of the year by people coming here for the winter. A daily average of 250 people is being maintained at the free camping grounds of the city at De Soto Park, and it is estimated that 30 per cent of those find work in Tampa and vicinity.

A new record for rainfall during the month of October was established this year, more than double the normal amount being registered. November has been dry and slightly above normal in temperature.

The Safety Movement is being actively sponsored in Tampa by the local Police Department and by the Board of Public instruction. The Police Department is enlisting the aid of the various clubs and organizations in educational work, and is forming traffic squads of Boy Scouts to study traffic problems and to direct traffic at congested street intersections in the residential districts. Ninety-two public schools of Hillsborough County will observe Safety Week. Prizes will be offered for the best essays on accident prevention and the children will be requested to take a safety pledge.

A Hallowe'en party was given at the Assembly Hall on October 27. This was entirely planned and conducted by the ladies of the organization, who are members of the Tampa Electric Benefit Association. The hall was decorated, a very entertaining program provided and appropriate refreshments were served. This was one of the most largely attended and most enjoyable affairs ever given by the Association.

MR. H. C. FOSS, district manager, and his secretary, MR. C. M. HERRICK, spent some time in Tampa during November.

MISS MARGARET FERNANDEZ has been employed by the commercial department to take the place of MISS FRANCES PERRY, who has been transferred to the accounting department. Miss LUCILLE CARRUTHERS has been transferred from the lighting to the commercial department.

MR. E. H. LUCAS, superintendent of distribution, spent a couple of weeks in Key West and Cuba during November.

Miss Jeannette Whatley, daughter of Mr. and Mrs. W. D. WHATLEY, was married to MR. IRA J. SMITH of the transportation department on October 22.

MR. CHARLES H. WILLIAMS, affectionately known to the entire organization and to many residents of the city as "Dad," passed away on November 17. MR. WILLIAMS was in his seventy-eighth year and had been continuously in the employ of the company since 1898. During the past few years he served as dispatcher at Tibbetts' Corner, one of the most congested downtown centers. "Dad" was a kindly, considerate gentleman and has left a perfect record for courteous treatment of patrons and everyone with whom he came in contact.

#### WOONSOCKET, R. I., NOVEMBER 23

Optimism is still apparent among local cotton men, and it is thought that good operation will continue in these mills, with probably some increase in the operation of the Nyanza Mill after January 1.

No slackening has been noted in the production of the woolen and worsted industry, although it is probable that there will be some slight decrease in the middle

of December, due to the usual seasonal fluctuation of this business. Some of the local worsted mills are, however, planning to increase their operation around January 1, due to additions to their plants and machinery, these being the Lafayette Worsted Company, the Verdun Manufacturing Company and Jarret Brothers.

There is apparently no change in the local machine industry. This business, as heretofore, remains exceptionally dull. The business in this line has fallen off in other sections, and it is not felt that we can look for any material increase for some months to come.

Reports from retail store officials indicate a slight gradual improvement in retail business conditions. There is practically little unemployment in our territory, and merchants are optimistic relative to retail holiday business.

The continued activity of the textile mills, together with the gradual coming on of new business contracted during the year, has caused our load and output to increase during the last month. It is estimated that we will have still further increases before the first of the year.

We are negotiating contract with Jarret Brothers, for 150 kilowatt additional power service, and with the Stillwater Worsted Mills for 225 kilowatts for day and night load. We recently contracted with the Dunn Worsted Mills for 37½ kilowatt night power, and with the Enterprise Dye Works for 75 kilowatt regular service, part of which will be used as relay.

It is expected that the new mill of the Lafayette Worsted Company, for which we contracted some time ago the entire power supply, will be placed in operation shortly after the first of the year, and we also expect the Nyanza Mills to put the greater part of their new mill building into operation by that time. New business contracted with the Rathbun Knitting Company should come on our lines in either December or January, and some slight increases in load are expected at the Woonsocket Spinning Company and the Shambow Shuttle Company.

Articles of incorporation were recently filed for the Cavedon Worsted Mill, and negotiations are pending for the purchase of a site in this city. The Glenbrook Worsted Company has recently completed a one-story building of brick and wood, to be used as a storehouse.

At the Verdun Manufacturing Company's plant the company is adding a one-story structure of brick to house its finishing department and is also erecting a one-story building to be used for garage purposes.

MR. E. L. MILLIKEN, assistant manager, in his capacity as chairman of the Woonsocket Chapter-American Red Cross, has general charge of the annual roll call now going on. The work of industrial solicitation is under the direction of Mr. F. K. SIMMONS, industrial service engineer.

MISS MARTHA CREIGHTON, of the accounting department, was married on October 23 to Walter Erickson of Millville, Mass. MRS. ERICKSON will continue her work with the company.

MESSRS. S. E. CHOQUETTE, sales agent, and C. L. O'LOUGHLIN, superintendent of the gas department, attended the annual Convention of the American Gas Association at Atlantic City, October 24 to 28. They brought back reports which indicate that Mr. BABSON's "historic" statement was somewhat out of focus.

MR. F. K. SIMMONS, industrial service engineer, made a tour of inspection of the Lynn Works of the General Electric Company with the New England Central Station Association of Power Engineers on October 25.

About 150 members attended the opening meeting of the club season on October 25. Supper was served and a fine entertainment provided by the House Committee,

under the direction of Mr. JAMES H. JEWELL. The improvements in the Club Rooms, made since the fire of last June, have greatly added to the comfort of the members.

A very successful stag party was held on November 7, about 100 men attending. There was plenty of entertainment, boxing and refreshments, and election returns were received from a local newspaper and direct from Providence and Boston.

MR. SAMUEL H. REID, assistant general manager of the Bureau of Safety of Chicago, recently spent five days going over the property of the company here in the interests of safety of the company, its employees and the public.

The second issue of the *Elgasco Record* has been distributed in Woonsocket and has received much favorable comment.

MR. LEO F. YETMAN, assistant accountant, is enjoying his annual vacation in New York.

MR. E. L. MILLIKEN, assistant manager, gave an address on "Electricity" before the Employed Boys' Division of the Y. M. C. A. on November 4.

MR. CARL RUCKDESCHEL, meterman in the gas department, attended the conference of New England Companies' gas metermen held in Fall River on Nov. 8.

The Woonsocket Kiwanis Club took an important part in the parade and celebration on Armistice Day, MESSRS. C. B. HEALY, accountant, and F. K. SIMMONS, industrial service engineer, were prominent in the club's arrangements.

MR. ERNEST HANSON, engineer at Number 1 station, has our sincere sympathy in the death of his youngest son, which occurred on November 15.

## Library Notes

**T**HE *discard of an important publication*—We have decided to depend upon local availability for the Gas Journal and therefore have for disposal bound volumes Nos. 101–128, (1908–1914); also bound volumes Nos. 133–155, (1916–1919); also loose numbers of volume No. 156, October 5, 1921 – December 28, 1921, making in all about 50 bound volumes and about a dozen loose numbers. This publication was founded in 1849, as *The Journal of Gas Lighting*, and is published in London. The name was changed to *Gas Journal* in recent years. Our binding is what is probably known to the trade as art vellum, a sort of smooth canvas. If we do not have a satisfactory bid we may give these to some local institution of learning.

With the compliments of Hayden, Stone & Company, we are in possession of a 92 page, 3 x 5 booklet, entitled "*Mining Companies and Tables of Statistics*." One would infer that the statistics largely concern mine and metal interests. There are, however, five pages of railroad statistics, ten pages on industrial stocks, two pages of crop statistics, and two pages of cotton statistics, besides other useful data. It is worth while to become familiar with this little booklet, which often obviates the need of consulting larger ones that are sometimes difficult to locate near at hand. More detailed in its statistics than the Hayden, Stone booklet, is the *Preliminary Summary of Mineral Resources* of the United States in 1921, published by the Geological Survey. The facts are here presented in the usual tabular form and cover the ground that we naturally expect in a publication of this kind. It is the forerunner of the annual report.

*Pender's Handbook for Electrical Engineers* has appeared in its second edition, 1922. The preface says that "nearly every article in the book has been revised, the amount of revision varying from a few lines to the entire article, according to the desires of the authors. While the greater part of the revisions appear in paragraphs interspersed throughout the book, new articles have been added. . . .

"The Standards of the American Institute of Electrical Engineers (formerly known as the Standardization Rules) are given in full at the end of the book. These standards are a verbatim copy of the 1922 edition and are reproduced with

the permission of the Board of Directors of the Institute. It is the plan of the publishers to revise these Standards whenever a new edition is published by the Institute, which in the past has been about every two years. . . .

"Care has been taken to make each article a readable compendium on its subject and not merely a series of disconnected paragraphs containing miscellaneous data, a too common fault in books of this class."

Among the articles added are: Frequency Changers, Phase Converters and Balancers, Starting and Lighting Systems for Automobiles. Among the articles completely rewritten are: Electron Theory, Hydraulics, Hydrology, Radio Communication (replacing the articles on Detectors, Electric Wave, Waves, Electromagnetic; Wave Meters; Wireless Telegraphy and Wireless); Standardization Rules and Standard Specifications; Telephony. In addition, extensive changes have been made in the following: Buildings, Allowable Unit Stresses in; Electrolysis, Power Factor Indicators and Reactive Volt-ampere Indicators.

*The Blue Book of Chicago Commerce, 1922*, easily reminds us of the commercial registers published by Hendricks and by Thomas, also of the Reuben H. Donnelley Corporation and of the Tel-U-Where Company of America. And then we are minded of the need for a guide book to all these buyers' assistants. We are beginning to get together some loose leaves to form a handbook for our library, and it is likely that one loose leaf will soon be devoted to suggestions in using just such buyers' handbooks as mentioned above.

*The United States Department of Agriculture Yearbook* we have been receiving from our Congressman, Hon. George Holden Tinkham, and in this we find a treatise on the cotton crop and plenty of statistics, maps, etc. The article by O. E. Baker, Agricultural Economist, Bureau of Agricultural Economics is a summary of Agriculture, having a series of maps covering about a hundred pages.



# Library of Stone & Webster, Inc.

## Recent Accessions

### (20) ELECTRICAL AND CHEMICAL ENGINEERING

- 471 **Handbook for electrical engineers: a reference book for practicing engineers and students of engineering.** Compiled by Harold Pender and William A. Del Mar. 2d ed. revised and enlarged. New York [c1922]. 4x7, 2263p, diags, tables. \*071.Am3524.2d.ed.
- 472 **Municipal hydro-electric power: review of the development of the Los Angeles city's hydro-electric power system and the operations of the Bureau of Power and Light . . . statement of earnings from April 1, 1917, to the end of the fiscal year ending June 30, 1921.** Los Angeles, nd. unnp, 6x9. \*6481.P96.0732
- 473 **Study of chemical engineering by the unit-operation method.** W. K. Lewis and R. T. Haslan. Publications of the Massachusetts Institute of Technology. Contribution from the Department of Chemical Engineering. Serial No. 24. July, 1922. Cambridge, 1922. 9p, 6x9. P\*074.L5895

### (50) RAILWAYS

- 474 **Victorian Railways Institute Review** (official organ of the Victorian Railways Institute). April, 1922. Melbourne, 1922. (31p), 8½x11. V. I. R.Rev.4/22
- 475 **Miscellaneous report of committees—read before the American Electric Railway Engineering Association, at its convention, held at Chicago, Ill., Oct. 2-5, 1922.** vp. 6x9. \*6944.1922p
- 476 **Getting railroad facts straight. . . .** C. S. Duncan. (An answer to F. J. Warne, witness for the railroad unions before the United States Senate, Committee on Interstate Commerce. New York, nd. 49p, 6x9. \*022.D9123

### (74) FINANCIAL

- 477 **Annual report of the bank commissioner of the state of Vermont for the year ending June 30, 1922.** Rutland, 1922. 257p, 6x9. \*1300.B22.1922
- 478 **Income in the United States: its amount and distribution, 1909-1919. . . .** Edited by W. C. Mitchell. Vol. 2. Detailed report. Publications of the National Bureau of Economic Research, Inc., No. 2. New York [c1922]. 440p, 6½x9½. \*025.N2134.Vol.2
- 479 **Distribution of income by states in 1919.** O. W. Knauth. Publications of the National Bureau of Economic Research, Inc., No. 3. New York [c1922]. 30p, 6½x9½. \*025.N2134.Vol.3
- 480 **Moody's analyses of investments and security rating books. . . . railroad investments. . . .** John Moody. 1922. Moody's Investors Service. New York [c1922]. 1762p, 8½x11½. \*022.M77ar.1922
- 481 **Going concern value in rate cases.** W. H. Blood, Jr. [Reprinted from **STONE & WEBSTER JOURNAL**, Aug., 1922]. Reprint No. 28. Boston, 1922. 17p, 6x9. \*025.B623gc

### (75) REPORTS

- 482 **Annual report of the Chief of Engineers, United States Army, 1921. In two parts.** United States War Department. Wash., 1921. Pt. 1—2115p, 6x9. \*6831.1921.Pt.1 Pt. 2—1434p, 6x9. \*6831.Pt.2.1921

- 483 Best's insurance reports (casualty and miscellaneous). . . . ninth annual edition, 1922-23. A. M. Best Co., Inc. Chicago [c1922]. 521p, 8x11. \*055. B464c. 1922-23
- 484 Annual report on the statistics of labor for the year ending Nov. 30, 1921. Mass. Department of Labor and Industries. Boston, nd. vp, 6x9. \*1402. 1921
- 485 A year in community service: report of the third year's work, May 1921—May 1922. Community Service, Inc. New York, 1922. 64p, 6x9. \*05.C7378. 5/21-5/22

## (76) LEGAL

- 486 Government war contracts. J. F. Crowell. Carnegie Endowment for International Peace. . . . Preliminary Economic Studies of the War. . . . No. 25. New York, 1920. 357p, 7x10. \*03.C211
- 487 The metal schedule of the Fordney Tariff Act—effective Sept. 21, 1922. [Reprinted from the Iron Age of Sept. 21, 1922] 24p, 4½x8½. \*6800.03181f. 1922
- 488 Highway laws of Louisiana—extra session of 1921 containing Acts Nos. 81, 91 and 120. Approved by the Lieut.-Gov. and Acting Governor. Nov. 22, 1921. 44p, 6x9. \*3900.031h. 1921
- 489 General information concerning patents. . . . Patent laws, edition of Dec. 1, 1912. United States statutes concerning the registration of trade-marks. . . . revised Aug. 15, 1922. Rules of practice in the United States Patent Office, revised Jan. 1, 1916. Department of the Interior, United States Patent Office. Wash., nd. vp, 6x9. \*6872.03.1912

## (90) SOURCES OF INFORMATION

- 490 Free public lectures and public educational courses, 1922-23 . . . Mass. Department of Education, Division of University Extension. Boston, 1922. 24p, 6½x9½. \*1461.L61un.1922-23
- 491 The Boston fire, Nov. 9, 1872. J. W. Decrow. Bureau of Commercial and Industrial Affairs, Boston Chamber of Commerce. Boston [c1922]. 32p, 6x9, illus. \*1461.C35f
- 492 Directory of Directors in the city of Boston and vicinity, 1922-23. Eighteenth annual number. Edited, compiled and published by the Bankers Service Co. Boston [c1922]. 1272p, 5½x8. \*1461.D62.1922-23
- 493 Statistical Abstract of the United States, 1921. . . . Department of Commerce, Bureau of Foreign and Domestic Commerce. Wash., 1922. 942p, 6x9. \*6896.02.1921
- 494 Publications of the Bureau of Standards. Circular of the United States Bureau of Standards, No. 24. 6th ed issued July 1, 1922. Wash., 1922. 182p, 7x10. \*6898.C24.1922
- 495 Information concerning distribution of government publications and price lists by the office of Superintendent of Documents, Wash., D. C. Wash., 1921. 4p, 6x9. \*6806.096in
- 496 Commercial and government radio stations of the United States. Edition of June 30, 1922. Department of Commerce, Bureau of Navigation, Radio Service. Wash., 1922. 120p, 6x9. \*6862.093.1922
- 497 Familiar quotations: a collection of passages, phrases, and proverbs traced to their sources in ancient and modern literature. John Bartlett. 10th ed. revised and enlarged by N. H. Dole. Boston, 1921. 1454p, 6x9. \*094. B284.1921

- 498 Check list for working up sponsorship material. G. W. Lee, chairman. Nov. 1, 1922. 1 typewritten sheet, 8x10 $\frac{1}{2}$ . \*087.L511ch
- 499 The Division of Engineering of the National Research Council in co-operation with Engineering Foundation . . . Sept., 1922. New York, 1922. 36p, 7x10. \*6839.N2138en
- 500 Hammond's enlarged map of New Jersey. Scale, 20 miles = 3 inches. C. S. Hammond & Co. New York [c1917]. 19x28. V1900.066h
- 501 A tale of service rendered by the Associated Bureaus of the Boston Chamber of Commerce, 1922. Boston, 1922. 20p, 3 $\frac{1}{2}$ x8. \*089.C35

## MISCELLANEOUS

- 502 Excavating machinery used in land drainage . . . U. S. Department of Agriculture. Bulletin 300. Contribution from the Bureau of Public Roads. . . . Wash., 1922. 59p, 6x9, illus. \*6880.B300
- 503 United States Steel: a corporation with a soul. Speech of Hon. W. R. Wood of Indiana, in the House of Representatives, June 23, 1922. Wash., 1922. 16p, 5x8. \*0293.W676
- 504 A constitutional revival, by the American people, on Constitution Day, Sept. 17—will be a warning to those who would defy its authority—that we hold them as enemies of our country—will you join in the celebration? F. W. Phelps. [In] Pacific Coast Mechanic, Aug.-Sept., 1922. \*6800.C765pa

## Coupons and Dividends Due

		Per Cent
Dec. 1,	Baton Rouge Electric Company, Preferred Stock.....	3
Dec. 1,	Baton Rouge Electric Company, Common Stock.....	5
Dec. 1,	Berkshire Power Company, The, 5s, 1934.....	2½
Dec. 1,	Blackstone Valley Gas and Electric Company, Preferred Stock...	3
Dec. 1,	*Blackstone Valley Gas and Electric Company, Common Stock...	2½
Dec. 1,	Central Mississippi Valley Electric Properties, Preferred Stock...	1½
Dec. 1,	Columbus Electric and Power Company, 6s, Series A, 1947.....	3
Dec. 1,	Connecticut Power Company, The, 7s, Coupon Notes, 1926.....	3½
Dec. 1,	*Connecticut Power Company, The, Preferred Stock.....	1½
Dec. 1,	*Connecticut Power Company, The, Common Stock.....	2
Dec. 1,	Edison Electric Illuminating Company of Brockton, 5s, 1930....	2½
Dec. 1,	*Key West Electric Company, The, Preferred Stock.....	1½
Dec. 1,	Northern Texas Electric Company, Common Stock.....	2
Dec. 1,	Pawtucket Gas Company of New Jersey, The, Preferred Stock...	2½
Dec. 1,	Puget Sound Power Company, 5s, 1933.....	2½
Dec. 1,	Tampa Electric Company, 5s, 1933.....	2½
Dec. 11,	*El Paso Electric Company, Common Stock.....	2½
Jan. 1,	Baton Rouge Electric Company, 7s, (Coupon Notes), 1923, Principal also Due.....	3½
Jan. 1,	Blackstone Valley Gas and Electric Company, 5s, 1939.....	2½
Jan. 1,	Cape Breton Electric Company, Ltd., 5s, 1932.....	2½
Jan. 1,	*Columbus Electric and Power Company, 1st, Preferred Stock...	1¾
Jan. 1,	*Columbus Electric and Power Company, 2nd, Preferred Stock...	1¾
Jan. 1,	*Columbus Electric and Power Company, Common Stock.....	2
Jan. 1,	Connecticut Power Company, The, 5s, 1956.....	2½
Jan. 1,	Eastern Texas Electric Company, Preferred Stock.....	3
Jan. 1,	*Eastern Texas Electric Company, Common Stock.....	2
Jan. 1,	Electric Light & Power Company of Abington and Rockland, The, 7s, (Coupon Notes), 1923.....	3½
Jan. 1,	Electric Light & Power Company of Abington and Rockland, The, Capital Stock.....	4
Jan. 1,	El Paso Electric Company, 5s, 1932.....	2½
Jan. 1,	El Paso Electric Company, 7s, (Coupon Notes), due 1925.....	3½
Jan. 1,	*Haverhill Gas Light Company, Capital Stock.....	2½
Jan. 1,	Houghton County Electric Light Company, 5s, 1927.....	2½
Jan. 1,	Houghton County Traction Company, 5s, 1937.....	2½
Jan. 1,	Keokuk Electric Railway & Power Company, 5s, 1925.....	2½
Jan. 1,	Mississippi River Power Company, 5s, 1951.....	2½
Jan. 1,	*Mississippi River Power Company, Preferred Stock.....	1½
Jan. 1,	New London Gas and Electric Company, The, 5s, 1933.....	2½
Jan. 1,	Northern Texas Electric Company, 5s, 1940.....	2½
Jan. 1,	Northern Texas Traction Company, 5s, 1933.....	2½
Jan. 1,	Paducah Electric Company, 5s, Series A, 1924.....	2½
Jan. 1,	Paducah Electric Company, 6s, Series B, 1924.....	3
Jan. 1,	Pawtucket Electric Company, 5s, 1938.....	2½
Jan. 1,	*Ponce Electric Company, Preferred Stock.....	1¾

\*Payable quarterly.

	Per Cent
Jan. 1, Reno Power, Light and Water Company, 6s, 1944.....	3
Jan. 1, Savannah Electric Company, 5s, 1952.....	2½
Jan. 1, *Savannah Electric and Power Company, Debenture Stock, Series A.....	2
Jan. 1, *Savannah, Thunderbolt and Isle of Hope Railway, The, 4s, 1947... 1	
Jan. 1, Sydney and Glace Bay Railway Company, Ltd., 5s, 1932.....	2½
Jan. 1, Woonsocket Electric Machine and Power Company, 4½s, 1931..	2¼
Jan. 8, El Paso Electric Company, Preferred Stock.....	3
Jan. 15, Keokuk Electric Company, 6s, 1923, Principal also Due.....	3
Jan. 15, *Puget Sound Power & Light Company, Prior Preference Stock....	1¾
Jan. 15, *Puget Sound Power & Light Company, Preferred Stock.....	1¾
Jan. 15, *Puget Sound Power & Light Company, Common Stock.....	1

\*Payable quarterly.

Dividend rates based on the last declaration.

# Quotations on Securities of Companies under Stone & Webster Management December 1, 1922.

The Securities Department executes orders on commission for those wishing to purchase or sell.  
Requests for information in regard to the companies will be answered promptly.

COMPANY	BONDS		PREF. STOCK		COMMON STOCK	
	Int. Rate	Price and Int.	Div. Rate	Price	Div. Rate	Price
Ab. & Rock., The El. Lt. & Pr. Co. of { Notes, July, 1923	7%	100½	No	Pref	8%	140
Baton Rouge Elec. Co. { Bonds, 1939 Notes, Jan., 1923	5%	92	6%	86		
	7%	115				
Blackstone Valley Gas & Elec. Co. (Common Stock par value \$50)	5%	99	*6%	98	10%	76
Cape Breton Elec. Co., Ltd.	5%	83	6%	65		12
Central Mississippi Valley Electric Properties	No	Bonds		78		11½
Chicago, Wilmington & Franklin Coal Co. (Common Stock par value \$10)			*6%	90	10%	25
Columbus Elec. & Power Co.	6%	103	*7% 1st *7% 2d	103½ 92		95
Columbus Power Co., The	5%	97		.....		.....
Connecticut Power Co., The	5%	97	*6%	96		
Connecticut Valley Lumber Co. { Serial Bonds June, '23-'34	6%	100½ 98				
Eastern Texas Elec. Co. { Bonds, 1942 Notes, May, 1925	5%	91	*6%	85	8%	92
	7%	101½				
Edison Elec. Illg. Co. of Brockton { Bonds, 1930	5%	100	No	Pref	10%	188
El Paso Elec. Co. { Bonds, 1932 Notes, 1925	5%	95	6%	88	10%	127
	7%	101½				
Fall River Gas Works Co.	No	Bonds	No	Pref	12%	216
Galveston Elec. Co.	5%	87		.....		.....
Galveston-Houston Elec. Co. { Notes, Aug., 1925 Notes, Feb., 1926	7% 8%	101½ 100	*6%	72 B L		31 B L
Galveston-Houston Elec. Ry. Co.	5%	88	No	Pref		.....
Haverhill Gas Light Co. (Stock par value \$50)	No	Bonds	No	Pref	9%	86
Houghton County Elec. Lt. Co. { Bonds, 1927 Notes, 1923 (Stock par value \$25)	5% 7%	92 100	6%	20		12

COMPANY	BONDS		PREF. STOCK		COMMON STOCK	
	Int. Rate	Price and Int.	Div. Rate	Price	Div. Rate	Price
Houston Elec. Co.	5%	99 <sup>B</sup>		.....		.....
Jacksonville Elec. Co.	5%	91½				
Jacksonville Tract. Co.	5%	86		37		8
Keokuk Electric Co. { Notes, January, 1923	6%	100	*6%	80		.....
Key West Elec. Co., The	5%	83		.....		.....
Lowell Elec. Lt. Corp., The	No	Bonds	No	Pref	10%	188
Mississippi River Power Co. { Bonds, 1951 Debentures, 1935	5% 7%	92½ <sup>B</sup> 103	*6%	84 <sup>A</sup> <sup>B</sup>		28 <sup>A</sup> <sup>B</sup>
Northern Texas Elec. Co.	5%	87	6%	84 <sup>B</sup> <sup>L</sup>	8%	85 <sup>B</sup> <sup>L</sup>
Northern Texas Traction Co.	5%	95	No	Pref		.....
Pacific Coast Power Co.	5%	94	No	Pref	No	Com
Pensacola Elec. Co.	5%	86		28		6
Public Service Investment Co.	No	Bonds	*6%	85		103
Puget Sound Elec. Ry.	5%	90 <sup>B</sup>		.....		.....
Puget Sound Power Co.	5%	95½	No	Pref	No	Com
Puget Sound Power & Light Co. { Notes, 1925 Bonds, 1941	8% 7½%	100 105	Prior *7% *6%	105 85	4%	55
Railway & Light Sec. Co. { First Series, 1935 Second Series, 1939 Third Series, 1939 Fourth Series, 1942 Fifth Series, 1944 Sixth Series, 1946	5% 5% 5% 5% 5% 5%	96½ 96 99 95½ 95½ 95	*6%	88	6%	80
Savannah Elec. Co.	5%	85½ <sup>B</sup> <sup>L</sup>				
Savannah Elec. & Power Co.	7½%	107	*8% *6%	102 70		17
Seattle Elec. Co., The { 1st Mortgage, 1930 Cons. & Ref., 1929 Seattle-Everett, 1939	5% 5% 5%	99½ <sup>B</sup> 95½ 90	No	Pref	No	Com
Sierra Pacific Elec. Co.			*6%	77		7
Tacoma Ry. and Pr. Co.	5%	90	No	Pref		.....
Tampa Elec. Co.	5%	95	No	Pref	10%	138
Whatcom County Ry. & Lt. Co.	5%	93	No	Pref	No	Com

Quotations are approximate. All stocks \$100 par value unless otherwise specified.

\*Cumulative. †Ex-Dividend. A. Listed on London Stock Exchange. B. Listed on Boston Stock Exchange. L. Listed on Louisville, Ky. Stock Exchange. N. Common shares have no par value. X. Ex-rights.













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